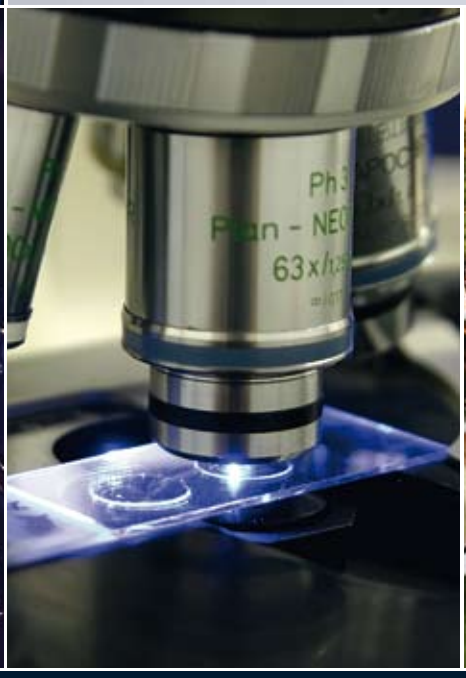
DR. FISCHER
Group

Catalogue
2010 / 2011



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Light is civilisation

It has accompanied the development and history of mankind since prehistoric times. Initially it was an open fire that was there to cook food and keep people warm but also to bring light to the darkness of the night, to be a gathering point for the family or the tribe and as a beacon to guide the hunter-gatherers back to their homes.
This is how it was for a long time. The pine chip, the oil lamp and the candle were the few steps of development on a long path that lasted more than half a million years.
It was not until around 1800 that the petroleum lamp for private use and above all gas lighting brought really bright light for the first time. In 1807/1808 the world saw the first bright street lights along Pall Mall in London. And the first external house lighting appeared in continental Europe in 1811, in Freiberg (Saxony, Germany). Lighting then began to spread fast throughout al major cities.
But it was not until electricity that artificial light first made it to the countryside too. Today, a world without electricity and artificial lighting is no longer imaginable at all.

The signal that guarantees attention

Light has always been understood as a signal or a sign: the paths of the sun and the moon and their occasional eclipses were central markers for early cultures.

Many ancient gods were gods of light (the sun or the moon) or appeared as light apparitions (the burning thorn bush); a star stood over the stable in Bethlehem as a signal light and there are still "eternal lights" burning to this day in synagogues and Catholic churches. All of these lights are signals in the darkness.

The ancient Greeks already knew of optic telegraphy with mirrors and torches, which was rediscovered in the Renaissance and eventually led to Samuel Morse's eponymous Code. Morse lamps are still used to this day at sea for short distances. And modern glass fibre networks, without which the internet and fast computer networks would not be possible, are the youngest children of optical telegraphy.

Light and motion

As long ago as 300 BC, large light fires were burning to show ships the way: the Pharos of Alexandria and also the Colossus of Rhodes. Light fires and lighthouses for seafaring remained the same for many centuries. It was not until much later that the world really got moving. At the beginning of the 19th century, the railway and the steamship heralded the beginning of modern travel. After a very short time, lighting and the equipping of transport vehicles and roads with lighting and light signals became an absolute necessity.

Light and safety

Not only in traffic are light signals unthinkable now. At the beginning of the 20th century the first lighted call systems, as they are still to be found today as call buttons in hospitals, were already in use. And who would care to do without emergency lighting, anti-panic lighting or safety lighting for escape routes in an emergency these days?

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DR. FISCHER Speziallampenfabrik GmbH

DR. FISCHER Speziallampen Vertriebs GmbH

DR. FISCHER Europe S.A.S.

DR. FISCHER Italy s.r.l.

KEGLER Lichttechnik GmbH

KANDEM Leuchten GmbH

DR. FISCHER LED GmbH

DR FISCHER Group

The DR FISCHER Group is one of the leading service providers for lamps. The individual companies within the group complement each other ideally in their respective specialist fields to make the perfect all-round service provider.
It is precisely this structure as a group of established specialised companies that makes it possible for us to fulfil the wishes and requirements of our customers precisely, quickly and in a solution orientated manner. Our greatest strengths are competent consulting, close contact to our customers, professional service and the manufacture of special user-specific applications.

DR FISCHER Speziallampenfabrik GmbH

DR FISCHER Speziallampenfabrik GmbH manufactures and sells a comprehensive range of special lamps for the most varied fields of application in the areas of traffic, medical technology and studio and stage lighting. For example, our traffic lights are well known as reliable lights with a long life that allow the longest possible times between changing. For this reason, traffic associations all over the world are among our customers. In Germany alone, our traffic signals are in use in well over 100 cities from Bremerhaven to Münich and Cologne to Potsdam.

DR FISCHER train lamps are not only used by Deutsche Bahn, but also the state railway companies in Italy, Belgium, France and South Africa.
Further areas of production of DR FISCHER Speziallampenfabrik GmbH are lamps for medical applications, halogen lamps and special models for the most varied of uses.

DR FISCHER Europe S.A.S.

DR FISCHER Europe S.A.S. produces special lamps with high-voltage technology on high-technology machines. Special high-voltage lamps are used on the French railways, at airports, in the navy, in medicine, in laboratory, photo and optical technology and many other sensitive areas.

DR FISCHER Italy s.r.l.

Its origins date back to the 1880s, when Alessandro Cruto founded a factory for lamp production in Alpignano. Specialising in the development and production of special lamps for refrigerators, cooker hoods, baking ovens etc. DR FISCHER Italy s.r.l. is the perfect complement for the product range of the DR FISCHER Group today.

KEGLER Lichttechnik GmbH

Innovation, creativity, flexibility and state-of-the-art manufacturing technology mean that even small-batch productions of special lamps can be completed economically and reliably. KEGLER Lichttechnik GmbH specialises in lamps that are used in the field of medicine. In this field in particular, where quality and reliability play a special part, KEGLER Lichttechnik GmbH is a well-regarded market partner.

KANDEM Leuchten GmbH

Founded on 1 August 1889 and one of the biggest lamp manufacturers in Europe until the Second World War, KANDEM is a sought-after partner for project solutions for offices and industry and also for special object-specific, tailor-made solutions. Their range of products include innovative light fittings for nearly every conceivable filed of application, including sports arenas, trade, administration and educational facilities.

DR FISCHER LED GmbH

In January 2010, the DR FISCHER Group installed a new division: DR FISCHER LED GmbH. This company concentrates on the development, manufacture and sales of technically functional, energy-efficient LED solutions. Project-specific modifications for various applications such as signal technology, medical technology and decorative lighting technology are offered.

We are certified for quality and environmental management.

The location at Diez is the main production centre for low-voltage lamps.

Left: DR FISCHER Italy s.r.l. produces special lamps for the domestic field at the Alpignano (Italy) location

Right: Our high-voltage lamp production is based in Pont à Mousson (France). This is also the headquarters of DR FISCHER Europe S.A.S.

One special area of competence: special designs

Special designs are one of the basic areas of competence of the DR FISCHER Group. It is based on many years of experience in the manufacture of special lamps for the most varied of uses. Because the companies in the DR FISCHER Group have also been manufacturing small batches of special lamps for a long time, special designs are not an unfamiliar task.

As a company that is constantly conducting further research and development, we are even interested in being confronted with real challenges. Whether these require entirely new solutions or a rethinking of routines from which something completely new, completely different can arise. We are willingly, passionately open to the ideas and wishes of our customers in this respect.

In the foyer of the Cederquist lawyers' office in Stockholm there is a large lead crystal chandelier (450 x 220 x 200 cm) that stands in the area like a small tree. The over-large light bulbs, which hang downwards, were made specially for this object.

Development of retrofit LED lighting for mobile traffic lights. Your benefits: easily exchangeable because of the same caps and long life

Manufacture to customer specifications: a very time-consuming halogen solution for radiotherapy for accelerating the healing of wounds


DB


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Light is safety

The development of modern traffic is very closely linked with the development of lighting.
Petroleum and in particular carbide lamps (made possible by the method of obtaining acetylene gas developed by Friedrich Wöhlers in 1862) ushered in the era of widespread use of car and motorbike headlights, bicycle lamps and train lights.

The history of traffic as we know it today is shaped crucially by the traffic light. The first traffic lights, invented by J. P. Knight, were set up on the junction of George Street and Bridge Street near the Houses of Parliament in London on 10 December 1868. They were equipped with railway signal arms and operated by hand by a traffic policeman. A gas light on top of the lights displayed a red or green light at night, depending on the position of the signal arms. It remained in use for four years. The first electrical lights to use red and green lamps were installed in Salt Lake City, USA in 1912. The world's first regular traffic lights are said to be the ones installed in Cleveland, USA on 5 August 1914. And the first three-coloured traffic lights appeared in the USA too, in New York and Detroit in 1920.

In Europe, the first three-coloured traffic lights were installed in Paris and Hamburg in 1922. They spread quickly through the major citied and even Moscow and Leningrad had their own traffic lights in 1930. Smaller cities and towns did not catch up until much later. Basel, for example, did not have its first traffic light until 1952 (and in the same year the first parking meter in Europe).

Pedestrian lights have existed in Europe since 1933 (Copenhagen). In 1952 the first automatic pedestrian lights were installed in New York ("Walk"/"Don't Walk"). The modern pedestrian lights with their pictograms first appeared in East Berlin with the "little traffic light man".

Traffic without light signals is now completely unthinkable. Or could you imagine vehicles without headlights, indicators or brake lights, dark streets, large junctions without traffic lights, motorways without illuminated variable message signs?

DR FISCHER brings light

DR FISCHER Speziallampenfabrik GmbH is a recognised specialist in traffic signal lamps. We manufacture and sell lamps for stationary and mobile traffic lights and variable message signs for road traffic, but also lamps for vehicles.

The primary task of traffic signals is to guarantee the safety of those using the roads. This means that the lamps must have the highest standards of quality in terms of material and manufacture. Above all, the lamps must be resistant to outside influences such as variations in temperature and vibration and a high, constant luminous flux must be guaranteed throughout their lives. Another important criterion for quality is economic viability. That means the lamps must have a long life, work efficiently in terms of energy and be easy to change.

DR FISCHER traffic signal lamps are known for fulfilling these requirements.

Halogen Lamps

For road traffic lights

Special features:

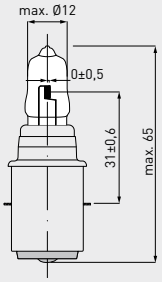
- high-quality materials (quartz glass burner, inert gas filling)
- precision of manufacture, minimum tolerances in the positioning of the filaments
- permanent regeneration of the filaments in the halogen cycle
- stainless steel caps with TIG welding (nickel-plated brass with conventional solder on request)
- also available in a service-friendly flat 10-pack

Specific benefits:

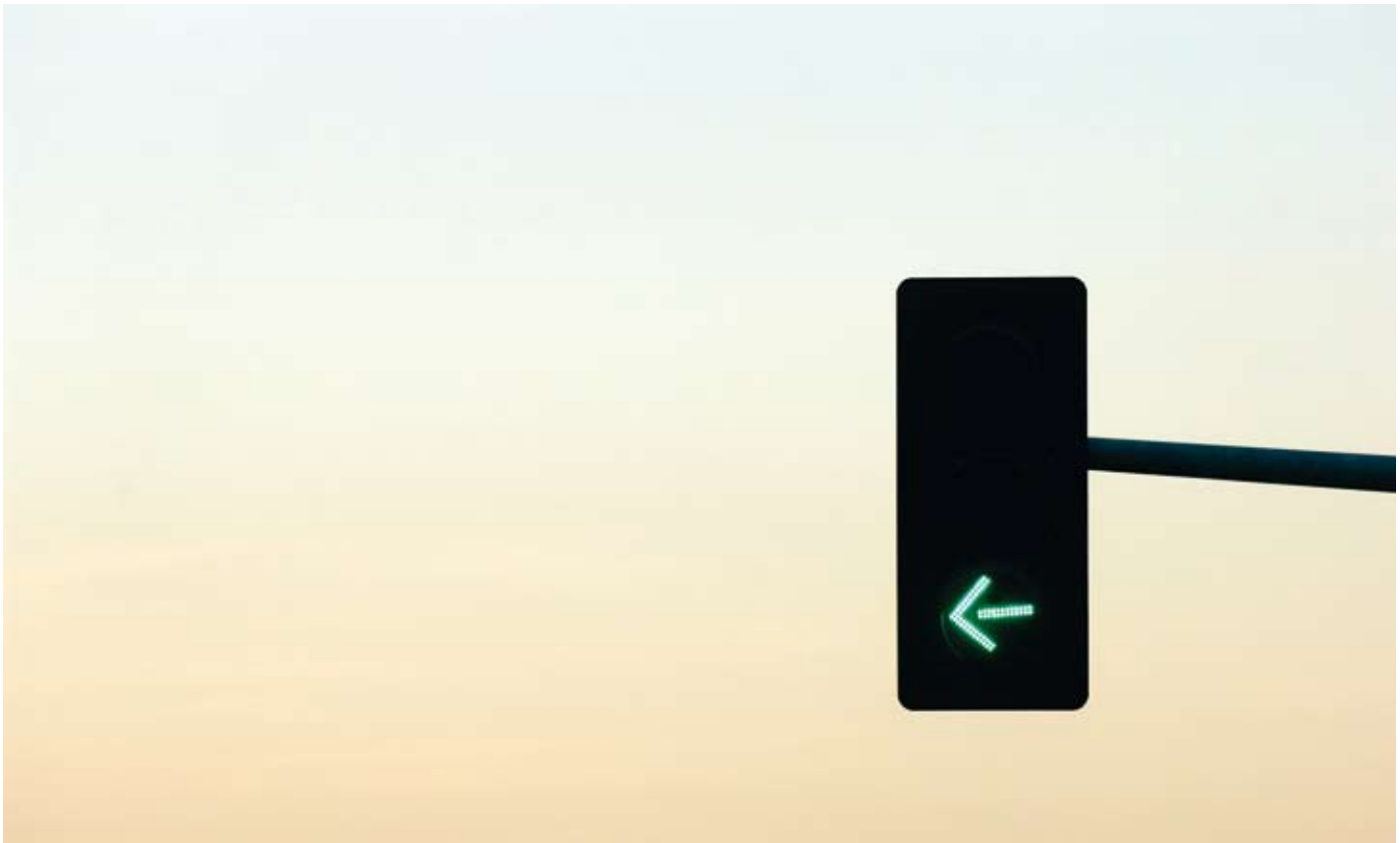
- very long life: up to 24 months between changes and therefore lower maintenance costs
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature and other outside influences

Areas of use:

- stationary traffic lights
- mobile traffic lights



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847116	10.5V 20W BA20s 2Y Halogen	10.5	20	BA20s	12	65	31	270	25,000	13,200	S135	100
00847117	10.5V 30W BA20s 2Y Halogen	10.5	30	BA20s	12	65	31	400	25,000	13,200	S135	100
00847108	10.5V 20W BA20s Halogen	10.5	20	BA20s	12	65	31	270	14,000	6,600	S135	100
00847109	10.5V 30W BA20s Halogen	10.5	30	BA20s	12	65	31	400	14,000	6,600	S135	100

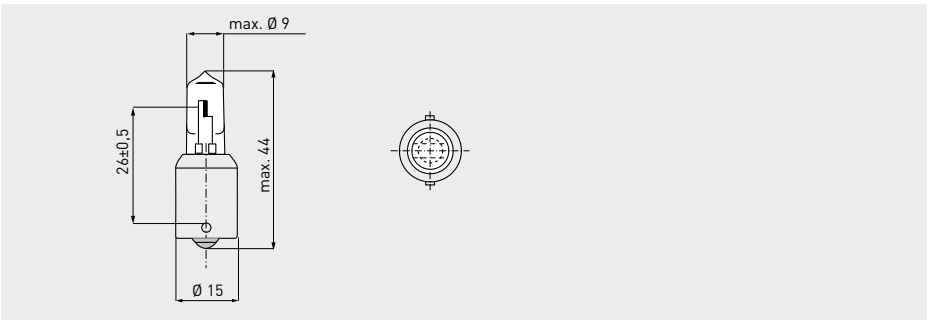


Halogen Lamps
For road traffic lights

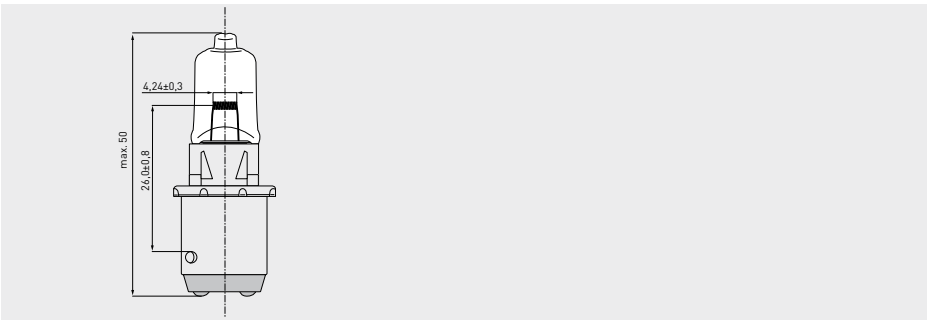
Special features:
- high-quality materials (quartz glass burner, inert gas filling)
- precision of manufacture, minimum tolerances in the positioning of the filaments
- permanent regeneration of the filaments in the halogen cycle

Specific benefits:
- longer life, meaning longer intervals between changing and lower maintenance costs
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature and other outside influences

Areas of use:
- stationary traffic lights
- mobile traffic lights



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8400061015	6V 10W BA15s	6	10	BA15s	9	44	26	110	2,000			
8400062015	6V 20W BA15s	6	20	BA15s	9	44	26	220	2,000			

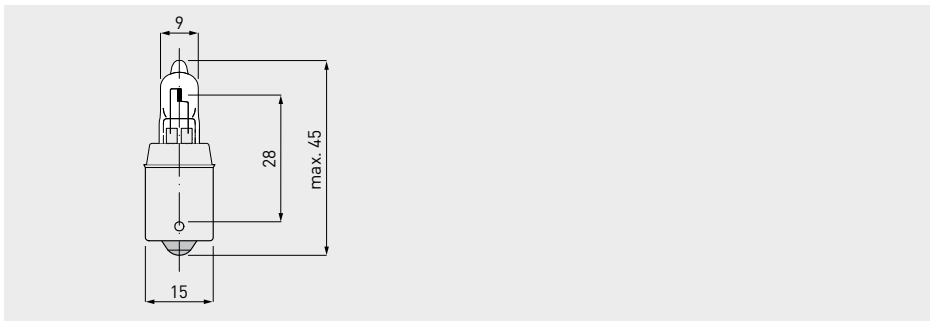


Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
60006613	10V 35W BA15d	10	35	BA15d	11.5	50	26	525	6,000	2,400	S135	100
60013557	10V 50W BA15d	10	50	BA15d	11.5	50	26	820	9,000	3,600	S135	100

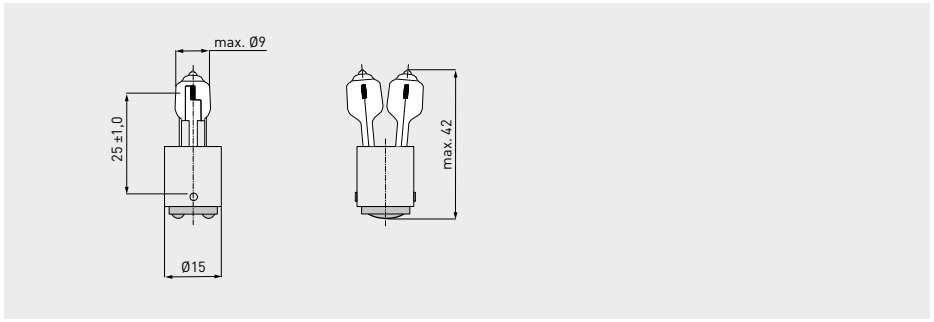
Halogen Lamps

For road traffic lights

For special features, specific benefits and areas of use see page 15



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8400121015	12V 10W BA15s	12	10	BA15s	9	45	28	120	2,000			



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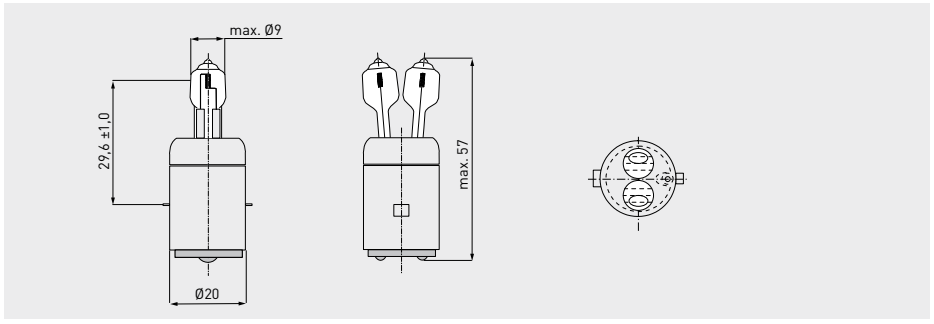
8412101015	12V 10/10W BA 15d	12	10	BA15d	9	42	25	120	2,000			



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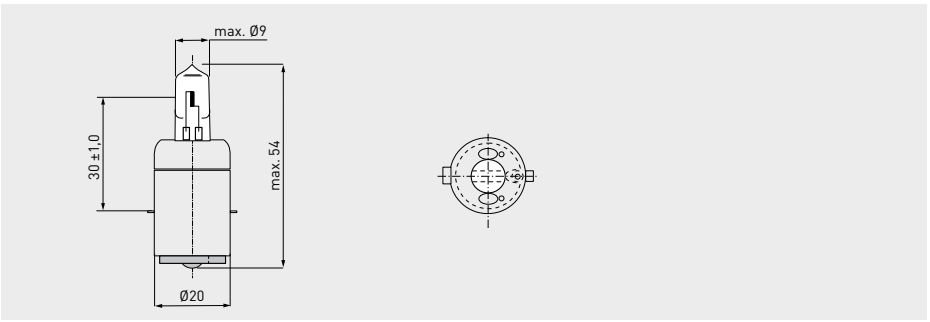
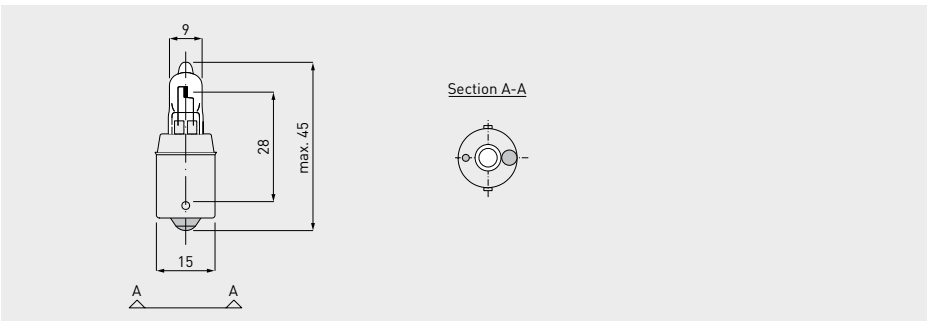
8412101020	12V 10/10W BA 20d	12	10/10	BA20d	9	57	29.6	120	2,000			

Halogen Lamps
For road traffic lights

For special features, specific benefits and areas of use see page 15



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8400122020	12V 20W BA 20d	12	20	BA20d	9	54	30	360	1,000			



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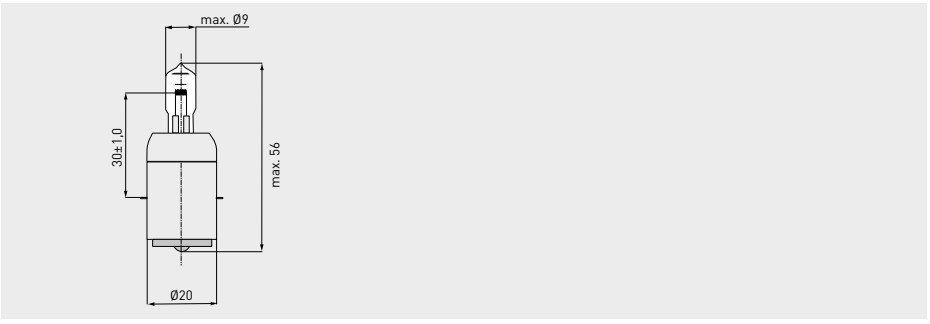
8400122015	12V 20W BA 15s	12	20	BA15s	9	45	28	360	1,000			

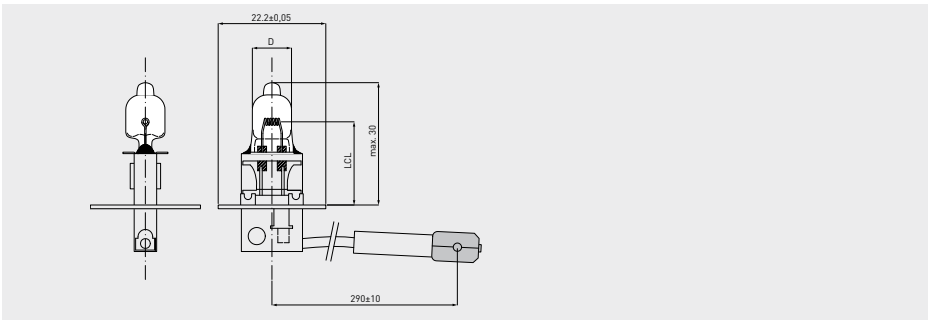


Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8400242020	24V 20W BA 20d	24	20	BA20d	9	56	30	280	2,000			
8424202000	24V 20W BA20S	24	20	BA20s	9	56	30	280	2,000			

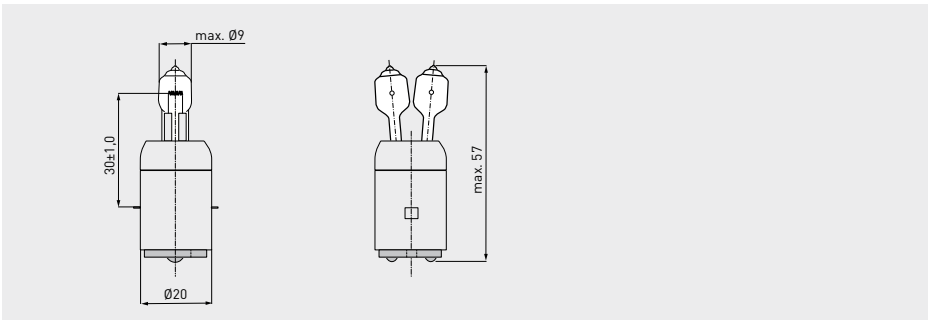
Halogen Lamps

For road traffic lights

For special features, specific benefits and areas of use see page 15



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8401210PKX	12V 10W PKX 22s	12	10	PKX 22s	9	36	17	120	2,000			
91002435H3	24V 35W PKX 22s	24	35	PKX 22s	8	36	17	375	1,500			



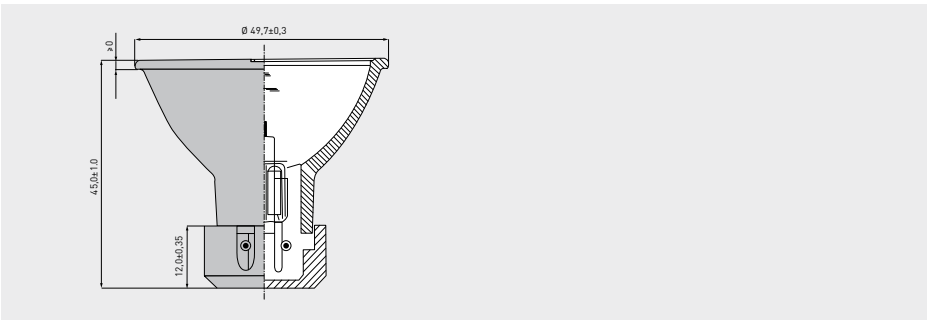
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8424202020	24V 20/20W BA 20d	12	20	BA20d	9	57	30	300	2,000			

Halogen cold mirror reflector lamps
For variable message signs on roads

Special features:
- high-quality materials (quartz glass burner, inert gas filling)
- precision of manufacture, minimum tolerances in the positioning of the filaments
- permanent regeneration of the filaments in the halogen cycle
- 10V 48W also available as long-life (15,000 hours average life)
- flexible connections to facilitate changing

Specific benefits:
- high, virtually constant luminous flux with a high optical level of efficiency throughout their entire lives
- longer life, meaning longer intervals between changing and lower maintenance costs
- high filament stability, which means very good resistance to temperature and other outside influences

Areas of use:
- variable message signs (matrix systems)
- display of recommended speed, danger zones and symbols for road safety



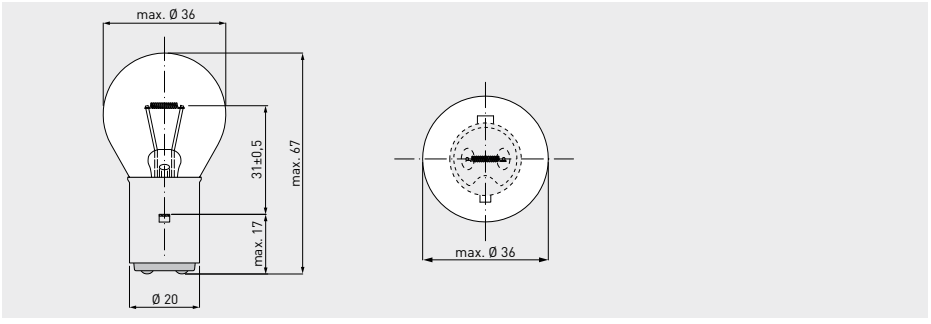
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00013995	10V 39W KLS	10	39	K23d	50	45		200	6,000	2,400	P90/15	50
00013996	10V 48W KLS	10	48	K23d	50	45		260	6,000	2,400	P90/15	50
60013827	10V 50W KLS	10	50	K23d	50	45		200	3,500	1,400	P90/15	50
60012997	12V 20W KLS	12	20	K23d	50	45		140	3,000	1,200	P90/15	50
00012998	12V 50W KLS	12	50	K23d	50	45		350	3,000	1,200	P90/15	50
00012999	12V 50W KLS	12	50	K23d	50	45		190	3,000	1,200	P90/15	50
60013757	42V 65W KLS	42	65	K23d	50	45		250	6,000	2,400	P90/15	50

Excess pressure lamps
For road traffic lights

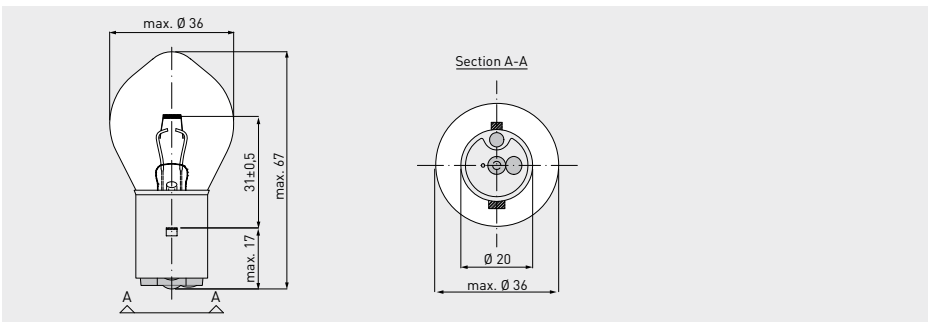
Special features:
- 6-month or 12-month lamps available (4,400 or 8,800 hours individual life)
- also available as a heavy-duty version
- compact filament body
- corrosion-proof, nickel-plated brass cap

Specific benefits:
- reduced maintenance costs as compared to 230-volt standard lamps
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature, shock and vibration
- can be used to convert from high-voltage to low-voltage technology (changing reflector and cap, installation of an additional transformer)

Areas of use:
- stationary traffic lights
- mobile traffic lights



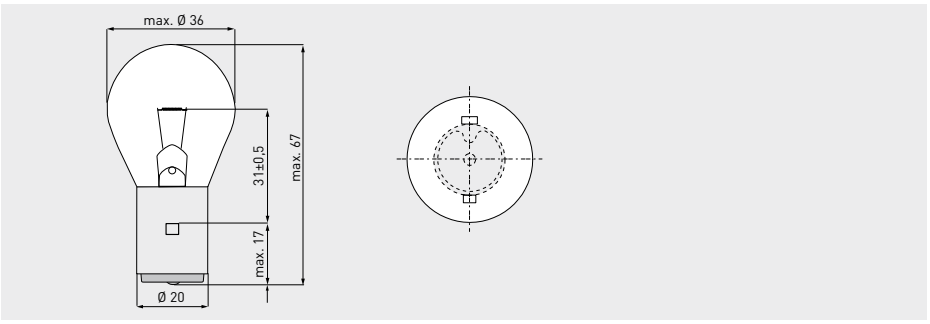
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842412	10V 10W Ba20s	10	10	BA20s	36	67	31	80	15,000		S135	200



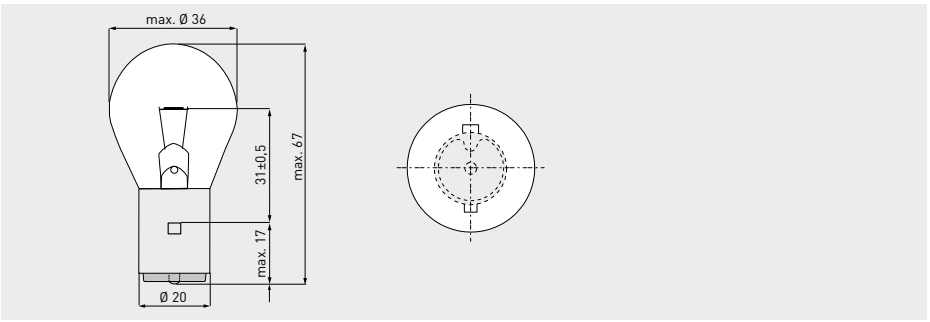
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842237	10V 20W BA20s	10.5	22	BA20s	36	67	31	270	6,000	4,400	S135	200
00842238	10V 30W BA20s	10.5	30	BA20s	36	67	31	400	6,000	4,400	S135	200
00842837	10V 20W BA20s JL	10.5	22	BA20s	36	67	31	270	14,000	8,800	S135	200
00842838	10V 30W BA 20s JL	10.5	30	BA20s	36	67	31	380	14,000	8,800	S135	200
00842482	10V 45W BA20s	10.5	45	BA20s	36	67	31	600	6,000	4,400	S135	200

Excess pressure lamps
For road traffic lights

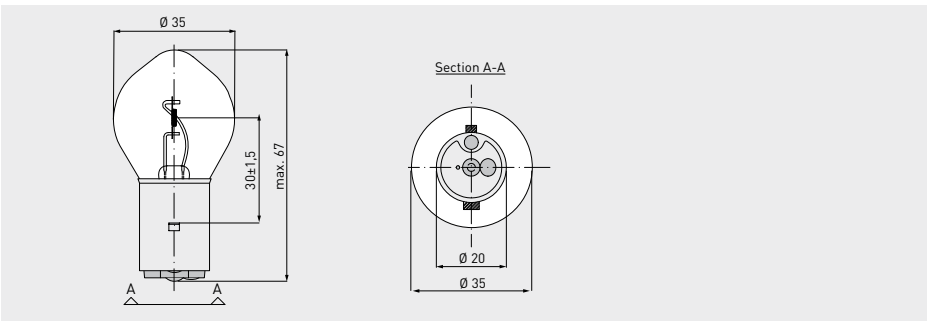
For special features, specific benefits and areas of use see page 20



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842281	12V 27W BA20s	12	27	BA20s	36	67	31	270	6,000	4,400	S135	200
00842374	12V 27W BA20d	12	27	BA20d	36	67	31	375	1,500		S135	200
00842460	12V 38W BA20s	12	38	BA20s	36	67	31	400	8,000	4,400	S135	200



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842442	12V 27W BA20s hook welding	12	27	BA20s	36	67	31	375	1,500		S135	200

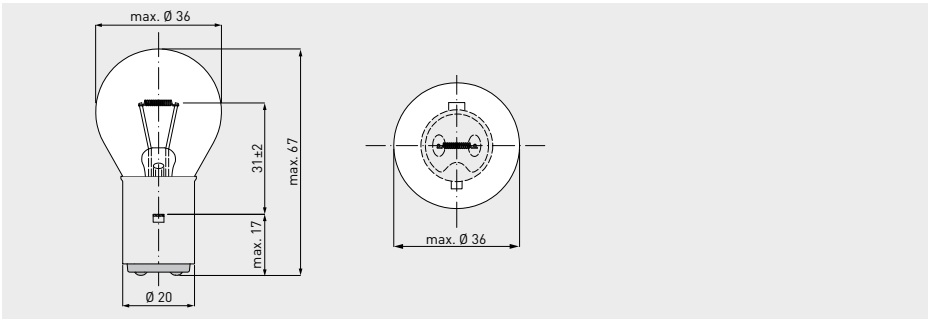


Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842526	12V 27W BA20s axial	12	27	BA20s	35	67	30	390	4,400 at 10.5 V		S135	200

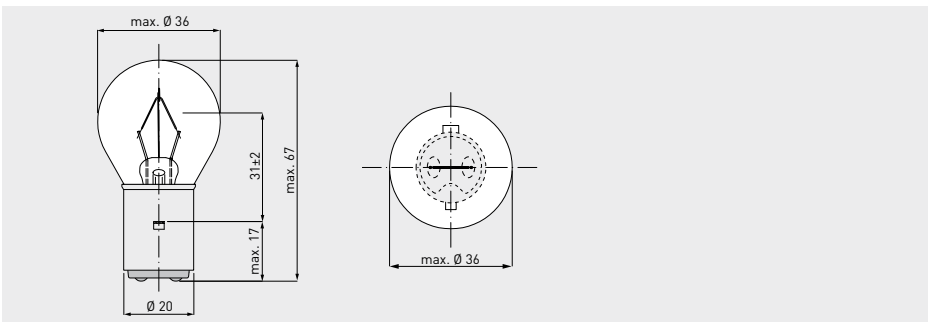
Excess pressure lamps

For road traffic lights

For special features, specific benefits and areas of use see page 20



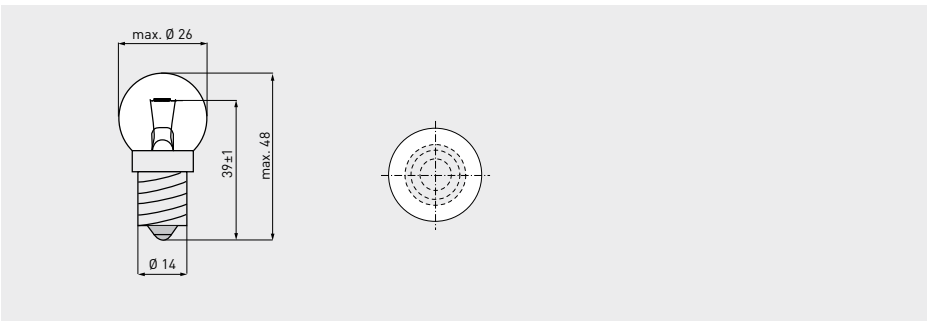
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842077	40V 25W BA20d	40	25	BA20d	36	67	31	250	8,000	4,400	S135	200
00842078	40V 40W BA20d	40	40	BA20d	36	67	31	500	8,000	4,400	S135	200
00842079	40V 60W BA20d	40	60	BA20d	36	67	31	800	8,000	4,400	S135	200



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842877	40V 25W Ba20d Longlife	40	25	BA20d	36	67	31	250	15,000	6,600	S135	200
00842878	40V 40W BA20d Longlife	40	40	BA20d	36	67	31	500	15,000	6,600	S135	200

Normal pressure lamps
For road traffic lights

For special features, specific benefits and areas of use see page 20



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842354	30V 15W E14	30	15	E14	26	48	39	95	2,000		S135	

Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9218 107 24602	44V 15W E 27 CL / A 60	44	15	E 27	61	107	63	102	8,000	3,000		60
9218 108 24602	44V 25W E 27 CL / A 60	44	25	E 27	61	107	63	215	8,000	3,000		60
9218 109 24602	44V 40W E 27 CL / A60	44	40	E 27	61	107	69	395	8,000	3,000		60

Excess pressure lamps with dual-filament technology

For road traffic lights

Excess pressure lamps with dual-filament technology

For road traffic lights

Special features:

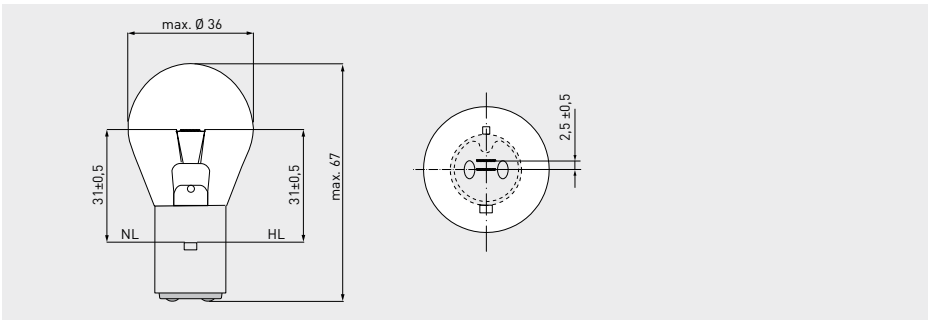
- 6-month lamps (4,400 hours individual life) available
- compact dual-filament version for automatic switching to auxiliary filament if the main filament malfunctions
- corrosion-proof, nickel-plated brass cap

Specific benefits:

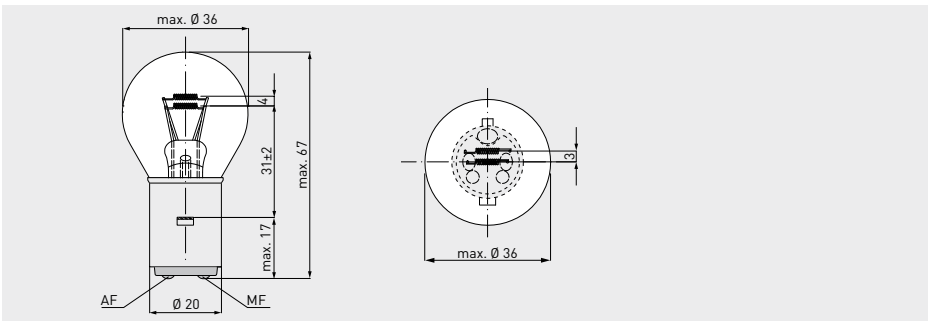
- reduced maintenance costs as compared to 230-volt standard lamps
- high traffic safety on account of the auxiliary filaments
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature and other outside influences
- can be used to convert from high-voltage to low-voltage technology (changing reflector and cap, installation of an additional transformer)

Areas of use:

- stationary traffic lights
- mobile traffic lights
- especially for red signals because if the main filament malfunctions the auxiliary filament kicks in immediately, which guarantees the high level of operating safety of the signals



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842365	10V 20/20W BA20d	10.5	20/20	BA20d	36	67	31	270	8,000	4,400	S135	200
00842366	10V 30/30W Ba20d	10.5	30/30	BA20d	36	67	31	400	8,000	4,400	S135	200



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842080	40V 25/25W BA 20d	40	25/25	BA20d	36	67	31	250	8,000	4,400	S135	200
00842081	40V 40/40W BA20d	40	40/40	BA20d	36	67	31	500	8,000	4,400	S135	200
00842082	40V 60/60W BA20d	40	60/60	BA20d	36	67	31	800	8,000	4,400	S135	200

LED traffic light module

For mobile traffic lights

Special features:

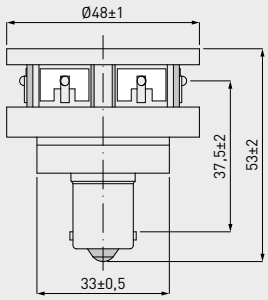
- available in red, amber and green
- non-sensitive, even with many cycles of operation
- very long life: 30,000 h = 20 times longer than conventional lamps
- BA15d nickel-plated brass cap (or other versions)
- best possible distribution of light by means of a central light source, guaranteeing an even signal view (no individual diodes are visible)
- suitable for ambient temperatures of between -40 °C and +50 °C

Specific benefits:

- strong light intensity for optimum signal perception
- constant light yield even if there is a decrease in current
- low maintenance costs because of the long life (> 5 years) of the diodes
- low energy consumption meaning battery lifetimes that are four times as long
- available as exchange module for easier changing

Areas of use:

- Signal provider in mobile traffic lights with a diameter of 210mm



Article no.	Description	V DC	W	Cap	Diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00330010	12V 2W Ba15s red	12	2	BA15s	49	55		100	30,000		any	
00330011	12V 2W Ba15s yellow	12	2	BA15s	49	55		100	30,000		any	
00330012	12V 2W Ba15s green	12	2	BA15s	49	55		100	30,000		any	

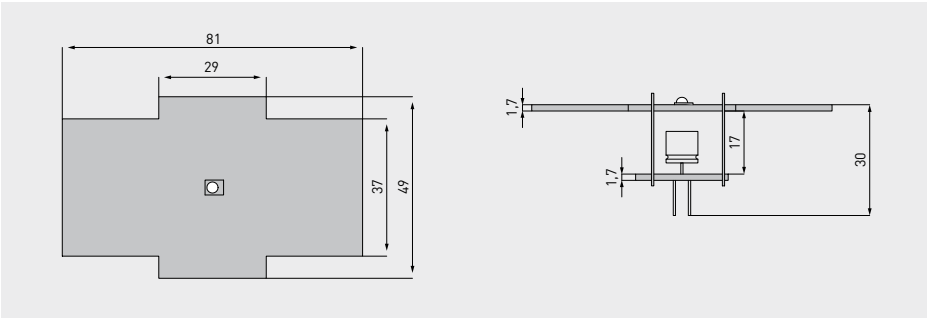
LED traffic light module

For mobile traffic lights and traffic lights for bicycles

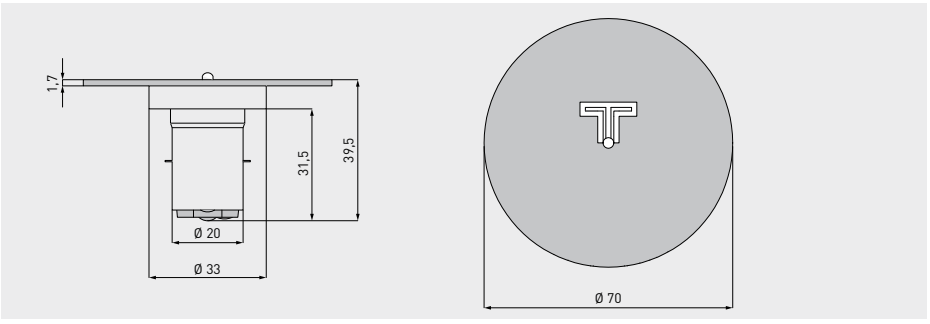
Special features:
- low maintenance costs
- easy to assemble
- low self-heating
- brand-quality LED from Lumileds

Specific benefits:
- Energy saving by higher efficiency
- resistance to many cycles of operation
- 1:1 exchange for incandescent or halogen lamps
- long life compared to incandescent and halogen lamps

Areas of life:
- suitable for traffic lights without current monitoring



Article no.	Description	V	W	Cap	Diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00331024	LED trafficsignal 12V AC 3W G4 red	12	2.5	G4		30	32	30	25,000		any	
00331025	LED trafficsignal 12V AC 3W G4 yellow	12	2.5	G4		30	32	30	25,000		any	
00331026	LED trafficsignal 12V AC 3W G4 green	12	2.5	G4		30	32	30	25,000		any	



Article no.	Description	V	W	Cap	Diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00331027	LED trafficsignal 12V AC 3W Ba20s red	12	2.5	Ba20s	70	40	42	30	25,000		any	
00331028	LED trafficsignal 12V AC 3W Ba20s yellow	12	2.5	Ba20s	70	40	42	30	25,000		any	
00331029	LED trafficsignal 12V AC 3W Ba20s green	12	2.5	Ba20s	70	40	42	30	25,000		any	
00331030	LED trafficsignal 12V AC 3W Ba20s white	12	2.5	Ba20s	70	40	42	80	25,000		any	

15,000 h krypton lamps

For road traffic lights

Special features:

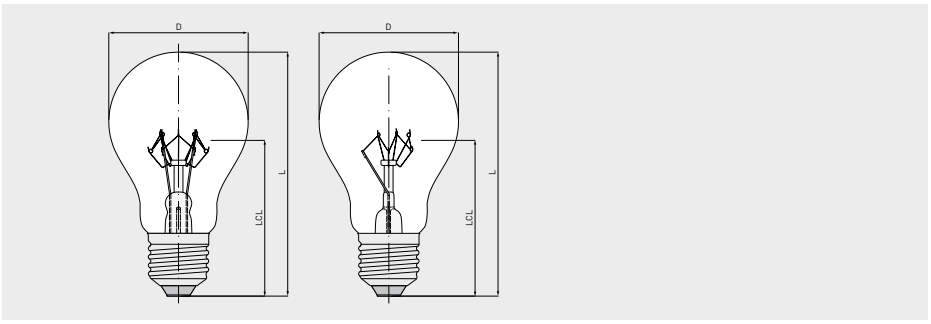
- precision of manufacture, minimum tolerances in the positioning of the filaments
- 9-supporter for the filaments
- krypton filling or vacuum version; both with premium quality getters
- corrosion-proof, nickel-plated brass cap

Specific benefits:

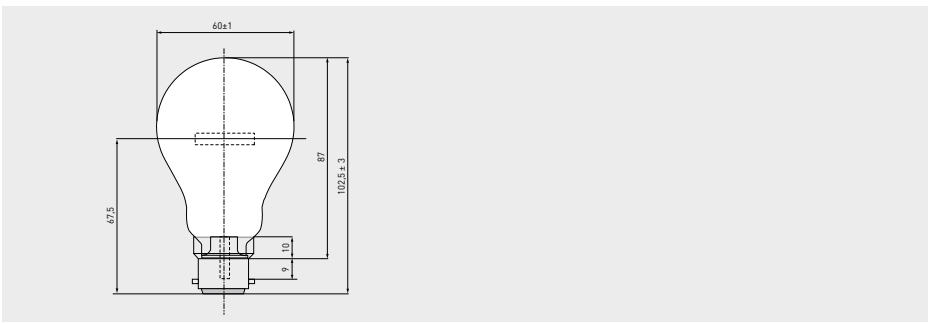
- easy to change lamps
- high luminous flux
- high resistance to shock and vibration
- must be replaced every 8-9 months, meaning reduced maintenance costs compared to high-voltage standard lamps

Areas of use:

- stationary traffic lights



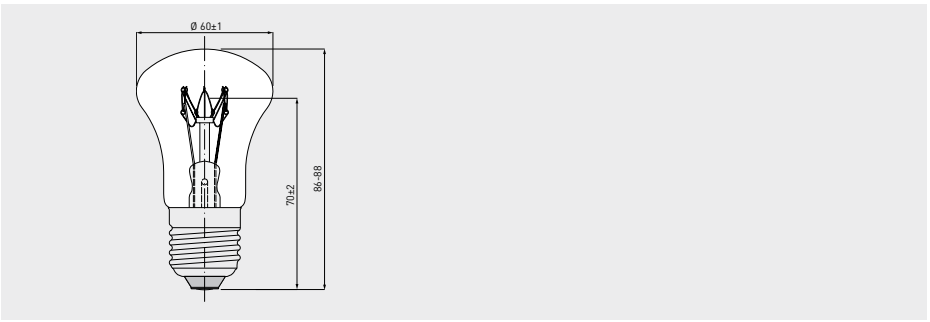
Article no.	Description	V	W	Cap	Bulb diameter D max. mm	Total length L max. mm	Light center length LCL mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8257 040 44460	235V 40W clear E27 B22	235	40	E27	61	107	69	230	15,000	6,000	S90	I / 60
8257 060 44460	235V 60W clear E27	235	60	E27	61	107	69	405	15,000	6,000	S90	I / 60
8257 075 44460	235V 75W clear E27	235	75	E27	61	107	69	520	15,000	6,000	S90	I / 60
8357 100 44440	235V 100W clear E27	235	100	E27	66	118	80	750	15,000	6,000	S90	I / 60



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8257 041 44460	235V 40W clear B22	235	40	B22	61	107	69	230	15,000	6,000	S90	I / 60
8257 061 44460	235V 60W clear 22	235	60	B22	61	107	69	405	15,000	6,000	S90	I / 60
8257 076 44460	235V 75W clear B22	235	75	B22	61	107	69	520	15,000	6,000	S90	I / 60
8357 101 44440	235V 100W clear B22	235	100	B22	66	118	80	750	15,000	6,000	S90	I / 60

15,000 h krypton lamps
For road traffic lights

For special features, specific benefits and areas of use see page 28



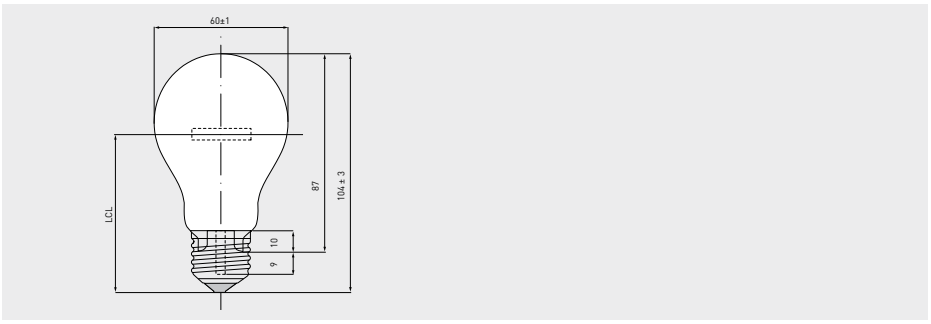
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8757 040 44460	235V 40W clear E27	235	40	E27	61	92	69	230	15,000	6,000	S90	I / 60
8757 060 44460	235V 60W clear E27	235	60	E27	61	92	69	405	15,000	6,000	S90	I / 60
8757 075 44460	235V 75W clear E27	235	75	E27	61	92	69	520	15,000	6,000	S90	I / 60
8757 100 44460	235V 100W clear E27	235	100	E27	61	102	79	750	15,000	6,000	S90	I / 60

8,000 h lamps
For road traffic lights

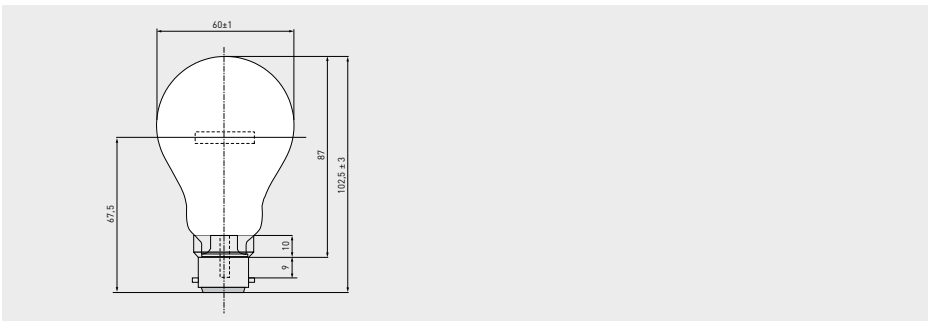
Special features:
- precision of manufacture, minimum tolerances in the positions of the filaments
- corrosion-proof, nickel-plated brass cap

Specific benefits:
- high resistance to shock and vibration
- must be replaced every 4 months

Areas of use:
- stationary traffic lights
- can light areas where there is a danger of explosion



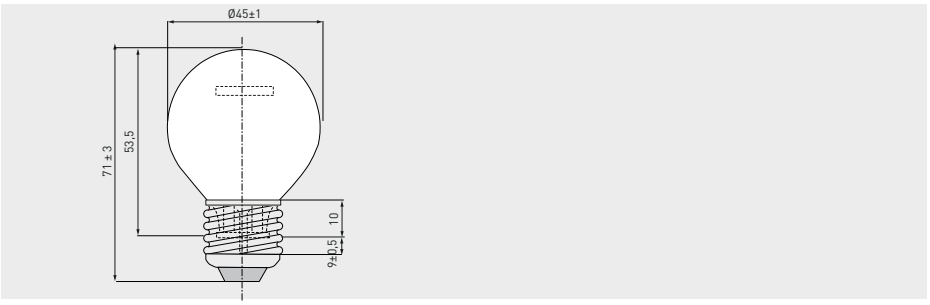
Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8247 040 33660	130V 40W clear E27	130	40	E27	61	107	69	290	8,000	3,000	S90	I / 60
8247 060 33660	130V 60W clear E27	130	60	E27	61	107	69	400	8,000	3,000	S90	I / 60
8247 075 33660	130V 75W clear E27	130	75	E27	61	107	69	600	8,000	3,000	S90	I / 60
8247 100 33660	130V 100W clear E27	130	100	E27	66	118	80	800	8,000	3,000	S90	I / 60
8247 040 44460	235V 40W clear E27	235	40	E27	61	107	69	230	8,000	3,000	S90	I / 60
8247 060 44460	235V 60W clear E27	235	60	E27	61	107	69	405	8,000	3,000	S90	I / 60
8247 075 44460	235V 75W clear E27	235	75	E27	61	107	69	540	8,000	3,000	S90	I / 60
8247 100 44460	235V 100W clear E27	235	100	E27	66	118	80	840	8,000	3,000	S90	I / 60



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8247 041 33660	130V 40W clear	130	40	B22	61	107	69	290	8,000	3,000	S90	I / 60
8247 061 33660	130V 60W clear	130	60	B22	61	107	69	400	8,000	3,000	S90	I / 60
8247 076 33660	130V 75W clear	130	75	B22	61	107	69	600	8,000	3,000	S90	I / 60
8247 101 33660	130V 100W clear	130	100	B22	66	118	80	800	8,000	3,000	S90	I / 60
8247 041 44460	235V 40W clear	235	40	B22	61	107	69	230	8,000	3,000	S90	I / 60
8247 061 44460	235V 60W clear	235	60	B22	61	107	69	405	8,000	3,000	S90	I / 60
8247 076 44460	235V 75W clear	235	75	B22	61	107	69	540	8,000	3,000	S90	I / 60
8247 101 44460	235V 100W clear	235	100	B22	66	118	80	840	8,000	3,000	S90	I / 60

8,000 h lamps
For road traffic lights

For special features, specific benefits and areas of use see page 30



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8945 025 33650	130V 25W clear E27	130	40	E27	46	107	74	155	8,000	3,000	S90	I / 50
8945 025 44450	235V 25W clear E27	235	40	E27	46	107	74	145	8,000	3,000	S90	I / 50
8945 040 33650	130V 40W clear E27	130	40	E27	46	107	74	304	8,000	3,000	S90	I / 50
8945 040 44450	235V 40W clear E27	235	40	E27	46	107	74	276	8,000	3,000	S90	I / 50

Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8945 026 33650	130V 25W clear B22	130	40	E27	46	107	74	155	8,000	3,000	S90	I / 50
8945 026 44450	235V 25W clear B22	235	40	E27	46	107	74	145	8,000	3,000	S90	I / 50
8945 041 33650	130V 40W clear B22	130	40	E27	46	107	74	304	8,000	3,000	S90	I / 50
8945 041 44450	235V 40W clear B22	235	40	E27	46	107	74	276	8,000	3,000	S90	I / 50

Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8747 040 33660	130V 40W clear E27	130	40	E27	61	92	69	290	8,000	3,000	S90	I / 60
8757 060 44460	130V 60W clear E27	130	60	E27	61	92	69	400	8,000	3,000	S90	I / 60
8757 075 44460	130V 75W clear E27	130	75	E27	61	92	69	600	8,000	3,000	S90	I / 60
8757 100 44460	130V 100W clear E27	130	100	E27	61	102	79	800	8,000	3,000	S90	I / 60
8757 041 44460	235V 40W clear B22	235	40	E27	61	92	69	230	8,000	3,000	S90	I / 60
8757 061 44460	235V 60W clear 22	235	60	E27	61	92	69	405	8,000	3,000	S90	I / 60
8757 076 44460	235V 75W clear B22	235	75	E27	61	92	69	540	8,000	3,000	S90	I / 60
8757 101 44460	235V 100W clear B22	235	100	E27	61	102	79	840	8,000	3,000	S90	I / 60

8,000 h standard lamps

For road traffic lights

Special features:

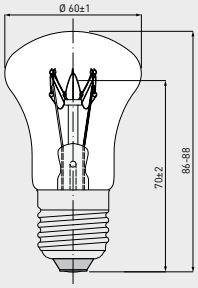
- corrosion-proof, nickel-plated brass cap

Specific benefits:

- must be replaced every 4 months

Areas of use:

- stationary traffic lights
- can light areas where there is a danger of explosion



Article no.	Description	V	W	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8845 040 33602	130V 40W clear E27	130	40	E27	51	88	70		8,000	3,000	S90	I / 200
8845 060 33602	130V 60W clear E27	130	60	E27	51	88	70		8,000	3,000	S90	I / 200
8845 075 33602	130V 75W clear E27	130	75	E27	51	88	70	500	8,000	3,000	S90	I / 200
8845 040 44402	235V 60W clear B22	235	40	B22	51	88	70		8,000	3,000	S90	I / 200
8845 060 44402	235V 75W clear B22	235	60	B22	51	88	70		8,000	3,000	S90	I / 200
8845 075 44402	235V 100W clear B22	235	75	B22	51	88	70		8,000	3,000	S90	I / 200

Vehicle lamps

For special vehicle lighting

Special features:
- lamps with a BAX15d cap fulfil DIN 72601 for motor vehicles
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- BAX (automotive) cap

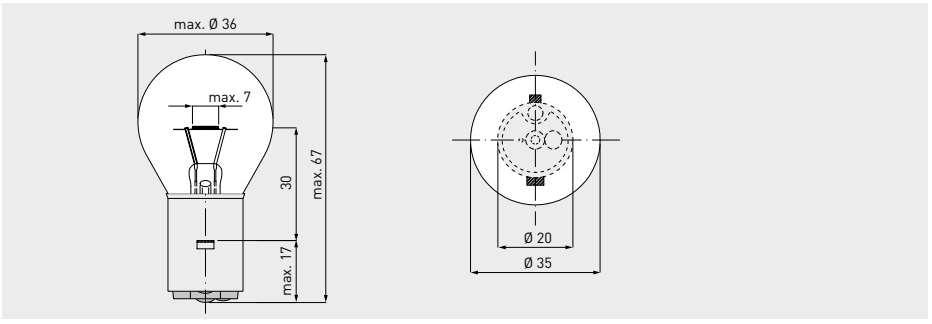
Specific benefits:
- high resistance to shock and vibration
- nickel-plated base contacts for safe electrical contact

Areas of use:
- forklift trucks, pallet trucks etc.
- railway signals
- old-timers
- special vehicles

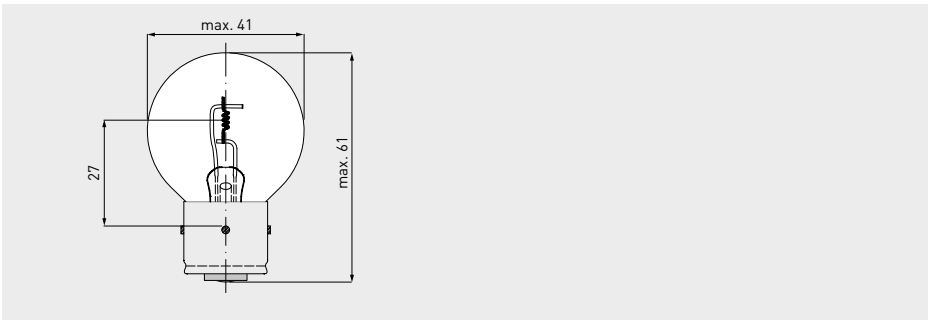
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00161500	6V 15W BAX15d	6	15		BAX15d	26.5	52.5	29.5	210	min. 100			
00121500	12V 15W BAX15d	12	15		BAX15d	26.5	52.5	29.5	210	min. 100			
00143000	24V 30W BAX15d	24	30		BAX 15d	26.5	52.5	29.5	210	min. 100			

Vehicle lamps
For special vehicle lighting

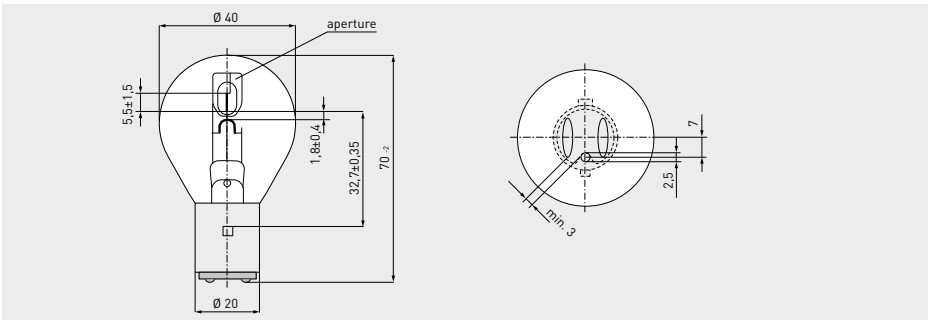
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00123500	12V 35W BA20s	12	35		BA20s	36	67	30	685	100			



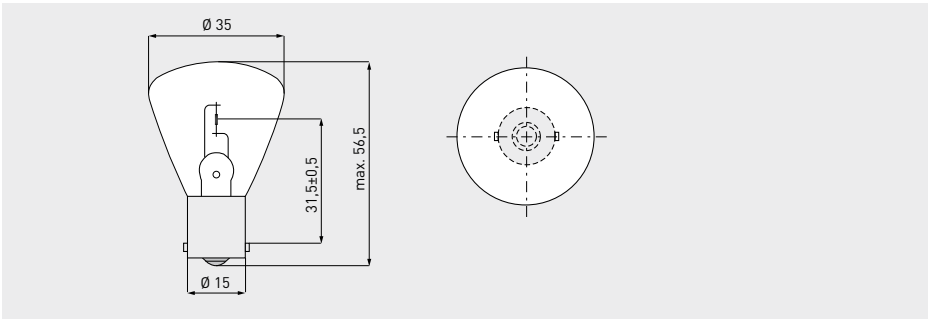
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844077	12V 45W BA21s3	12	45		BA21s	41	61	27	500	1,000			



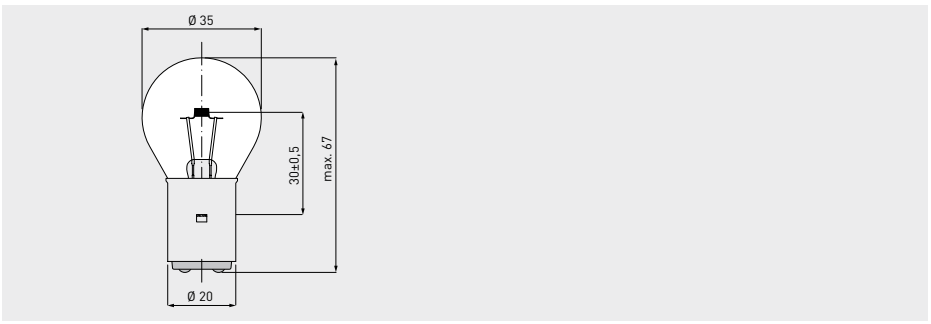
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00945114	12V 50/50W BA20d	12	50/50		Ba20d	40	70	32.7	840/900	70/100			
00945113	24V 50/50W BA20d	24	50/50		B20d	40	70	32.7	550	1,000			

Vehicle lamps
For special vehicle lighting

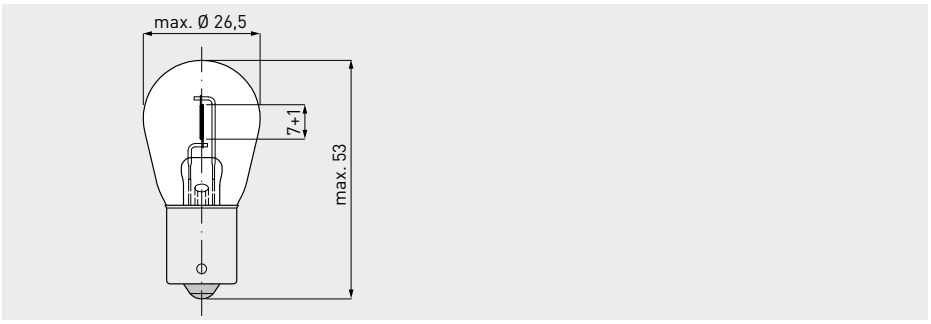
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00123700	12V 35W BA15s clear	12	35		BA15s	35	56.5	31.5	715	500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842447	12V 55W BA20d 35x67 clear	12	55		BA20d	35	67	30	800	100		S135	

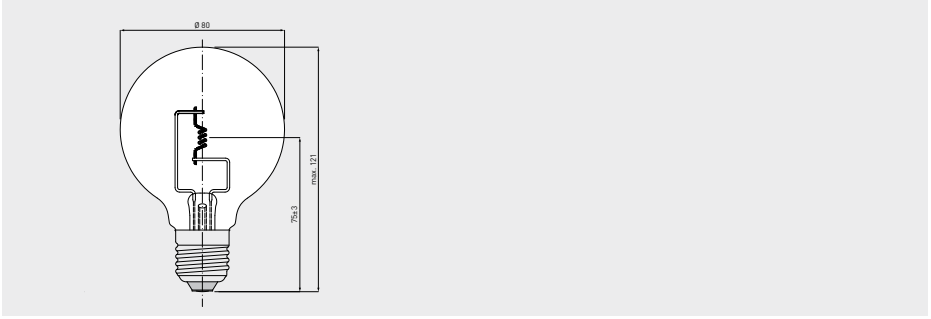


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844081	24V 21W Ba15s/19 26.5x53 clear	24	21	0.88	BA15s	26.5	53		210	1,000			

Vehicle lamps

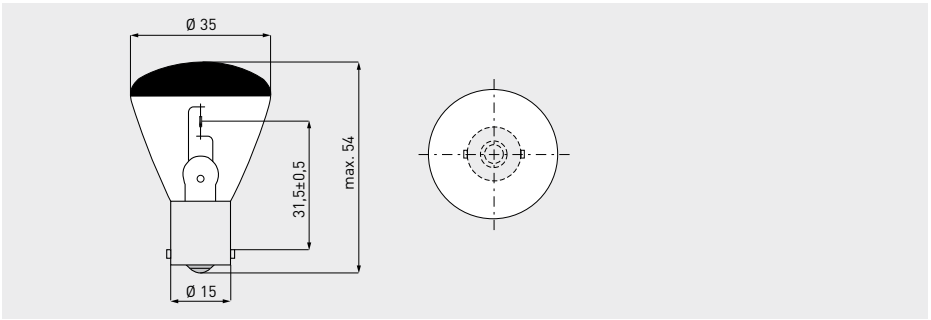
For special vehicle lighting

For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844079	24V 250W E27 80x121	24	250		E27	80	121		4,200	100		S135	

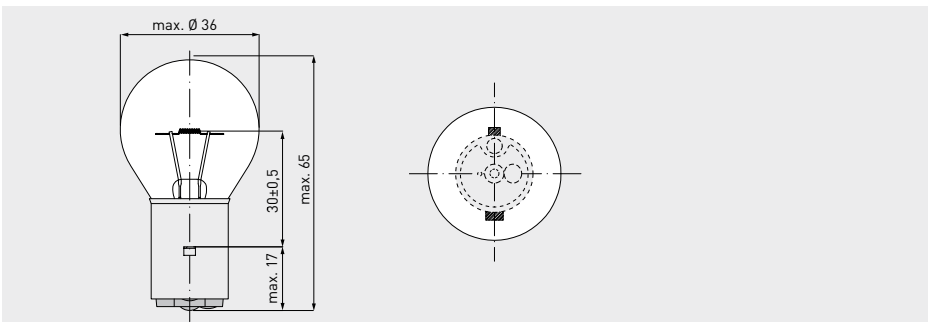
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00042500	24V 25W BA20d	24	25		BA20d	35.5	67	30					
00945055	45V 45W BA20d	45	45		BA20d	36	64	30	550	1,000			



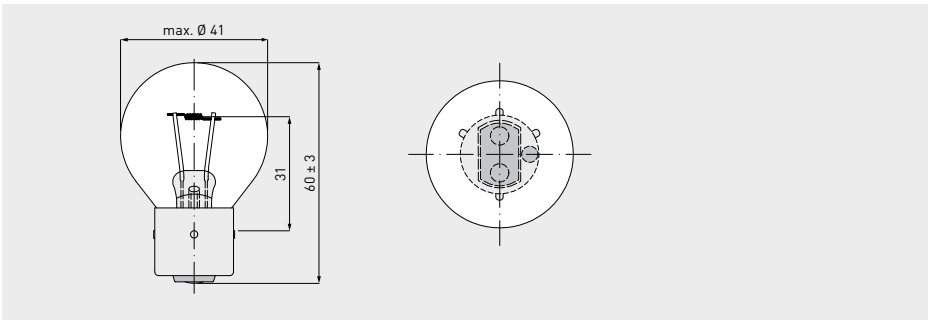
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00143600	24V 35W BA15s with black cap	24	35		BA15s	36	54	31.5	500	75			

Vehicle lamps
For special vehicle lighting

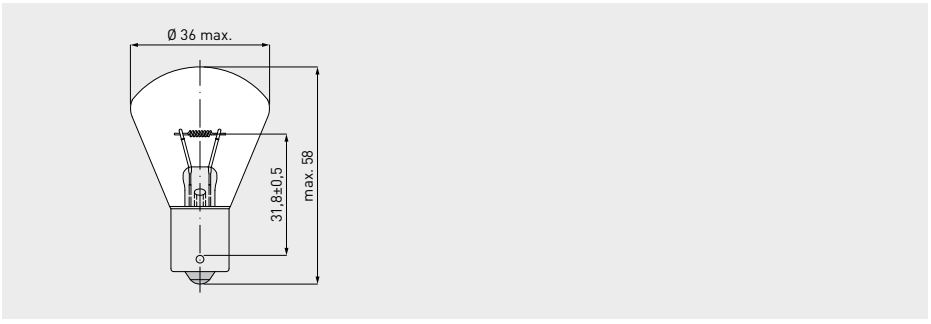
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00143500	24V 35W BA20s	24	35		BA20s	36	67	30	650	100			



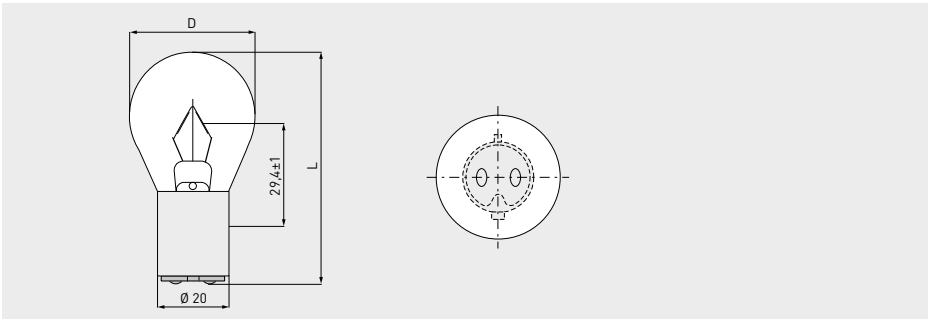
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844073	24V 40W BA21d4	24	40	1.67	BA21d4	41	63	31	540	500			



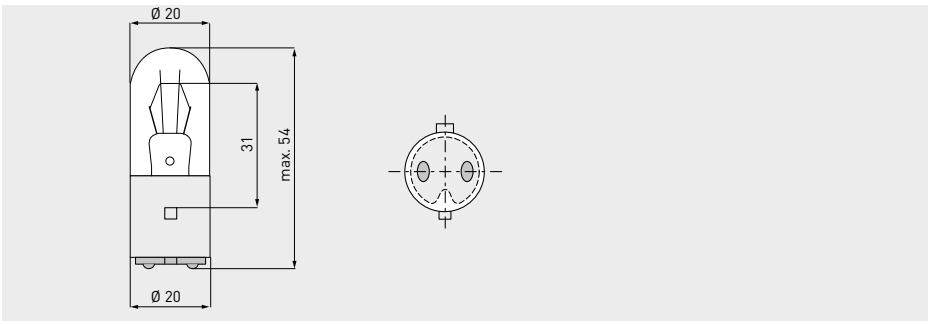
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844082	28V 45W BA15s/19 35x59 clear	28	45		BA15s	36	58	31.8	750	600			

Vehicle lamps
For special vehicle lighting

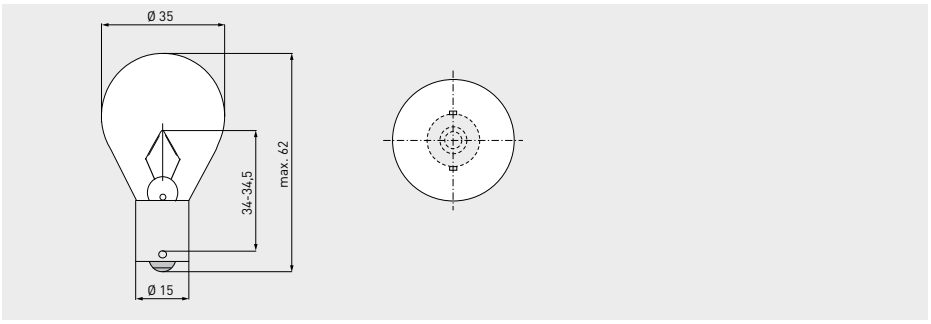
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00944044	48V 35W BA20s	48	35		BA20s	36	60	29.4	260	2,000			
00802500	80V 25W Ba20d/23	80	25		BA20d	35.5	65	29.4	200	1,000			
00944045	80V 35W BA20s	80	35		BA20s	36	60	29.4	450	2,000			



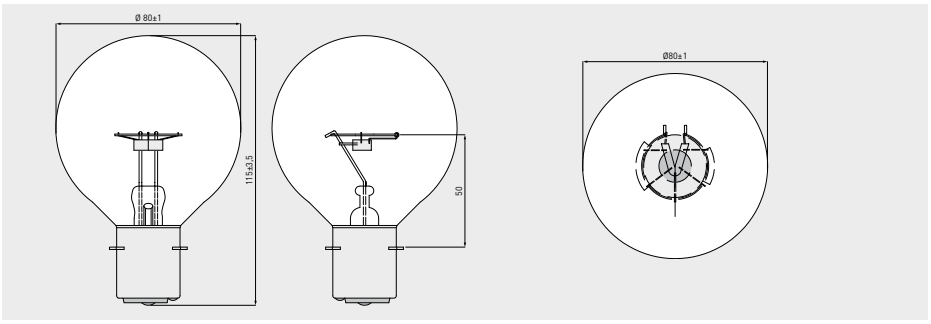
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00801000	80V 10W BA20d	80	10		BA20d	20	54	31	75	1,500			



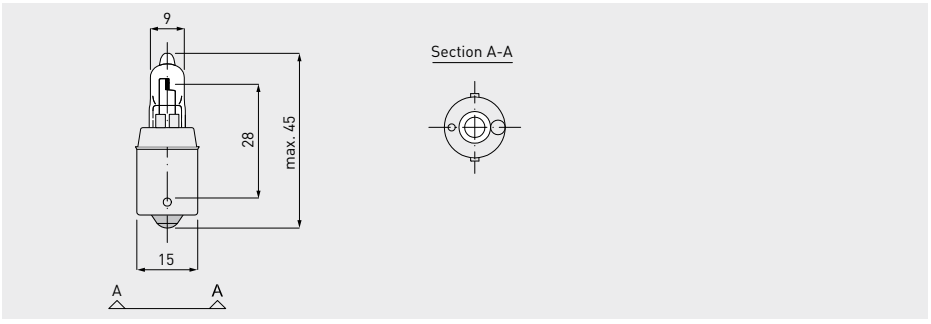
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00945105	80V 25W BA15s	80	25		B15s	35	62	34.5	200	1,000			

Vehicle lamps
For special vehicle lighting

For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844078	85V 250W P28s	85	250		P28s	81	118.5	50	4,120	500		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8400242015	24V 20W BA 15s	24	20		BA15s	9	45	28	280	2,000			


DB

Oncoming light

There were already rail tracks in mines at the beginning of the 16th century. But there was still a long way to go before the advent of the railway. The first public trains did not set off until the Stockton and Darlington Railway in 1825. Within a few decades, a large rail network had come about.
It soon became no longer possible to control the ever-expanding rail traffic with simple means such as whistles or the waving of flags or lanterns. Complex signal systems were created which also had to be illuminated themselves since the trains also ran in poor visibility and eventually at night too (in Germany from 1852).

At this early stage, the railway companies in the different countries were developing very different signal systems. This development must still be taken into consideration today by providers of lamps for railway signals and railways.

DR FISCHER on the right track

Railway signal lamps have to function safely under heavy conditions such as vibrations caused by rail traffic. Furthermore, changing lamps has always involved a great deal of effort. Consequently the requirements made of railway signal lamps must be very high.

DR FISCHER Speziallampenfabrik GmbH manufactures a range of lamps for a variety of state or private railways. They all fulfil the extremely high demands made by the railway operators and the supervising authorities.

Signal lamps for the German railways (Deutsche Bahn)

For railway traffic signals

Special features:

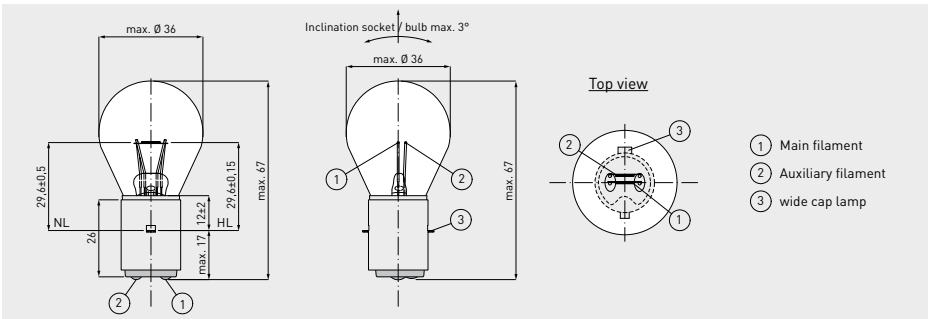
- fulfils the quality requirements of Deutsche Bahn AG
- dual-filament, excess-pressure technology lamps premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:

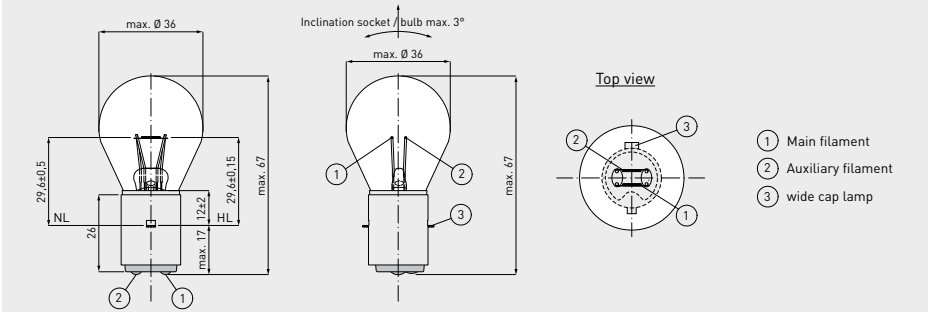
- switches to auxiliary filaments immediately if main filaments should malfunction
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to shock and vibration
- corrosion-proof, nickel-plated cap and nickel-plated base contacts to ensure safe electrical contact

Areas of use:

- railway traffic signals (lamps with a transversal filament must be placed vertically to the luminary axis)



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842296	12V 10/10W BA20d	12	10/10	0.85	BA20d	36	67	29.6	140	600	420	S135	200
00842088	12V 20/20W BA20d	12	20/20	1.7	BA20d	36	67	29.6	350	600	420	S135	200
00842089	12V 30/30W BA20d	12	30/30	2.5	BA20d	36	67	29.6	520	600	420	S135	200
00842889	12V 30/30W BA20d JL	12	30/30	2.5	BA20d	36	67	29.6	520	8,800	6,200	S135	200
00842888	12V 20/20W BA20d 30x67 clear JL	12	20/20	1.7	BA20d	36	67	29.6	350	8,800	6,200	S135	200

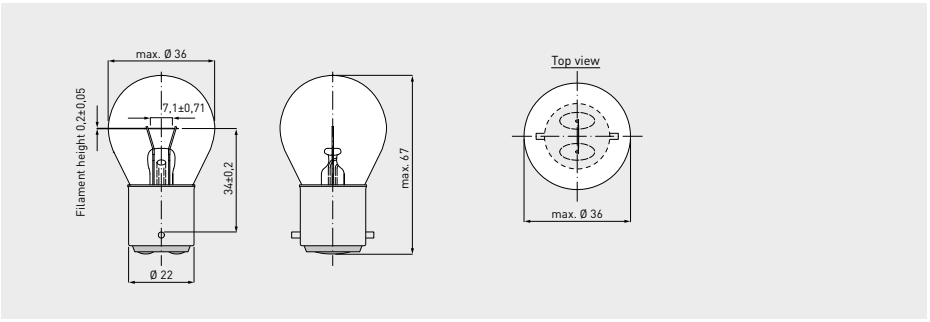


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842087	12V 10/10W BA20d	12	10/10	0.85	BA20d	36	67	29.6	140	600	420	S135	200

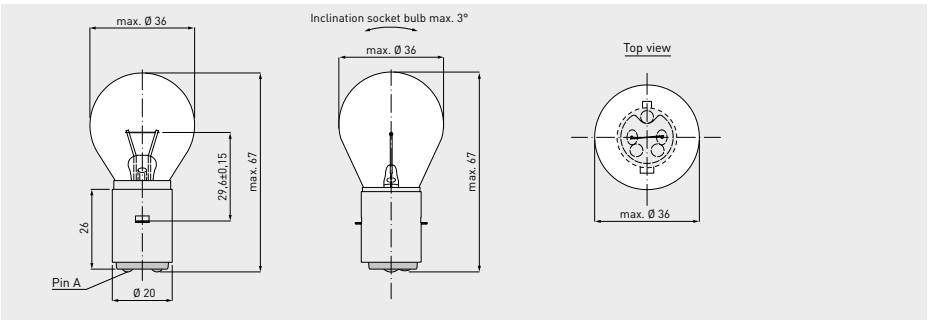
Signal lamps for the German railways (Deutsche Bahn)

For railway traffic signals

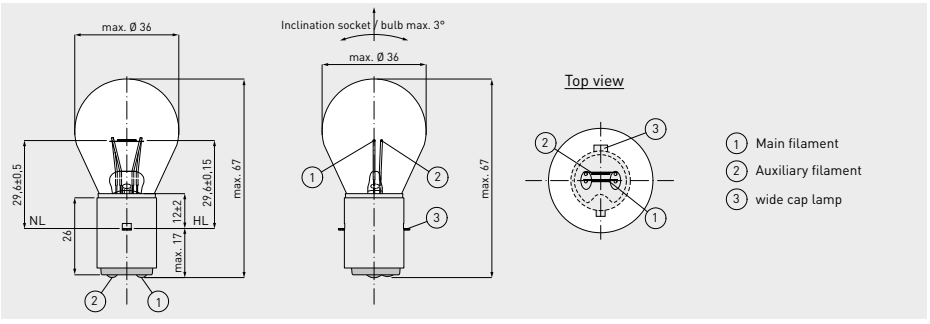
For special features, specific benefits and areas of use see page 42



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842084	12V 6W B22d/22	12	6	0.5	BA22d	36	67	34	50	600	420		



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842083	12V 6W BA20s	12	6	0.5	BA20s	36	67	29.6	55	600	420	S135	200
00842085	12V 6W BA20d	12	6	0.5	BA20d	36	67	29.6	55	600	420	S135	200
00842086	30V 15W BA20s	30	15	0.5	BA20s	36	67	29.6	170	600	420	S135	200



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842090	20V 7/7W BA 20d	20	7/7		BA20d	36	67	29.6	55	600		S135	
00842091	30V 15/15W BA20d	30	15/15	0.5	BA20d	36	67	29.6	220	600	420	S135	200
00842092	50V 25/25W BA20d	50	25/25	0.5	BA20d	36	67	29.6	380	600	420	S135	200

Signal lamps for the Austrian railways

For railway traffic signals

Special features:

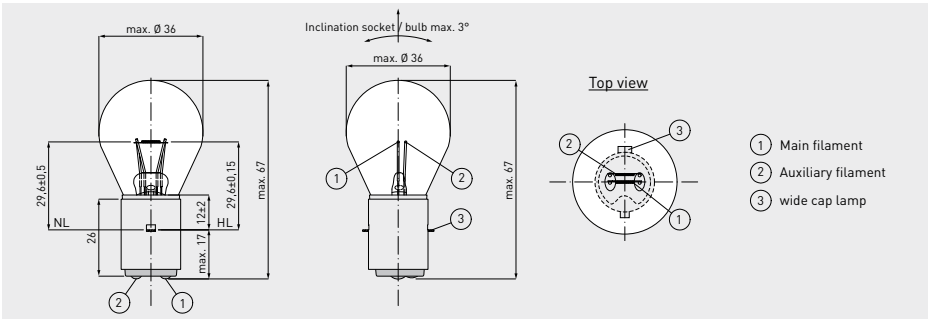
- excess-pressure technology lamps premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:

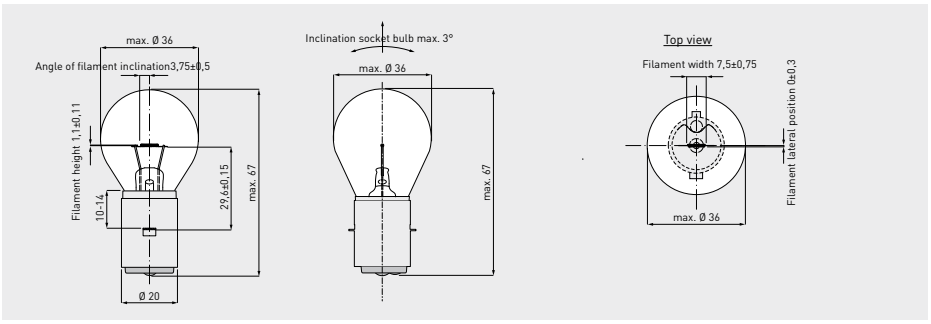
- switches to auxiliary filaments immediately if main filaments should malfunction
- must be replaced every von 12 months (1-year lamps), reducing maintenance costs
- high resistance to shock and vibration
- corrosion-proof, nickel-plated cap and nickel-plated base contacts to ensure safe electrical contact

Areas of use:

- Railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842855	12V 35/35W BA20d JL 35x67	12	35/35		BA20d	36	67	29.6	570	8,800	6,200	S135	200



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842849	12V 35W BA20s JL 35x67 clear	12	35		BA20s	36	67	29.6	570	8,000	6,200	S135	200
00842549	12V 35W BA20s 35x67 clear	12	35		BA20s	36	67	29.6	510	1,700		S135	
00842550	12V 50W BA20s 35x67 clear	12	50		BA20s	36	67	29.6	815	1,700		S135	
00842850	12V 50W BA20s JL 35x67 clear	12	50		BA20s	36	67	29.6	710	8,000	6,200	S135	200

Signal lamps for the French railways

For railway traffic signals

Special features:

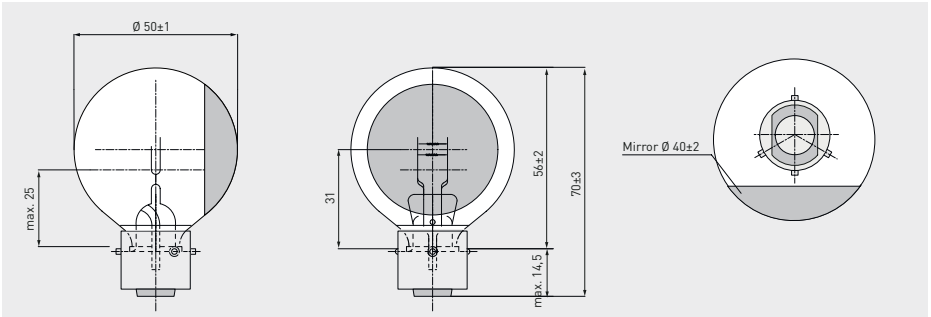
- fulfils the quality requirements of the French railway (SNCF)
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

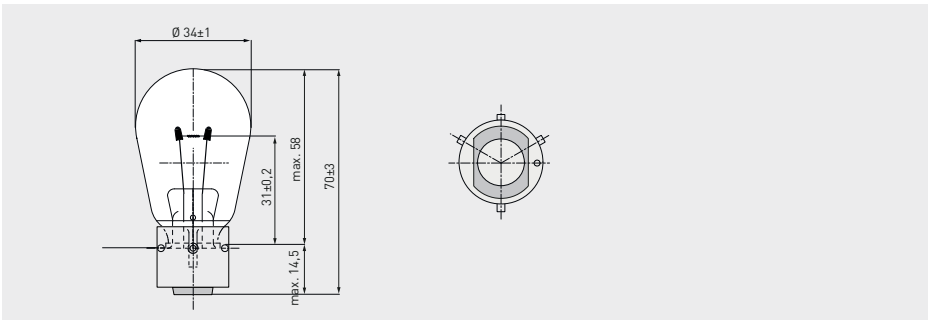
- long life
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated cap and nickel-plated base contacts to ensure safe electrical contact

Areas of use:

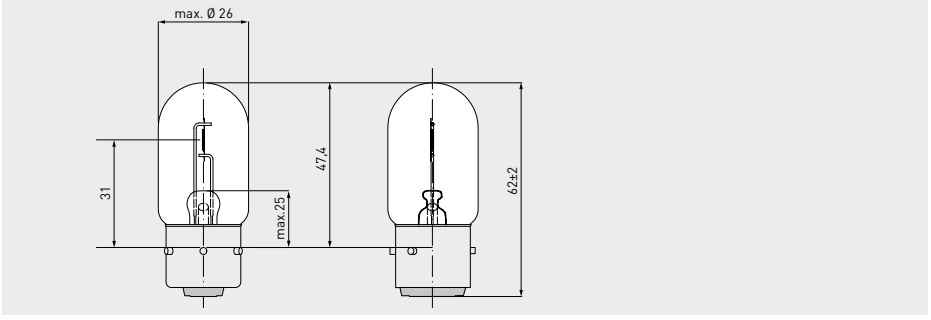
- railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9228 317 11622	6.5V 12.5/12.5W B21s-4 CL / SPH50	6.5	2 x 12.5		B21s-4	51	73	31	208	2,000			10



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9228 311 11622	6.5V 25W B21s-4 CL / P34	6.5	25		B21s-4	35	73	31	200	4,000			10
9228 312 12822	7.2V 15W B21s-4 CL / P34	7.2	15		B21s-4	35	73	31	110	4,000			10

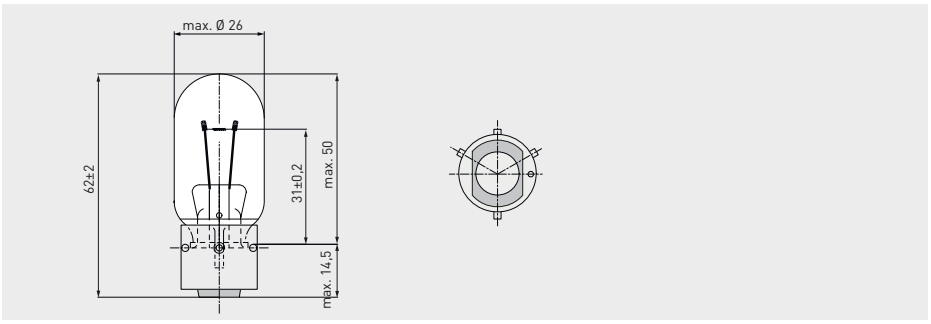


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9210 557 14122	7.7V 6W B21s-4 CL / T25	7.7	6		B21s-4	26	64	31	33	4,000			10

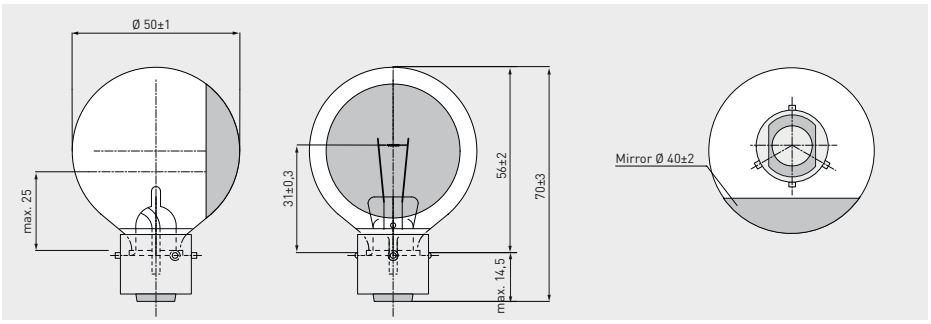
Signal lamps for the French railways

For railway traffic signals

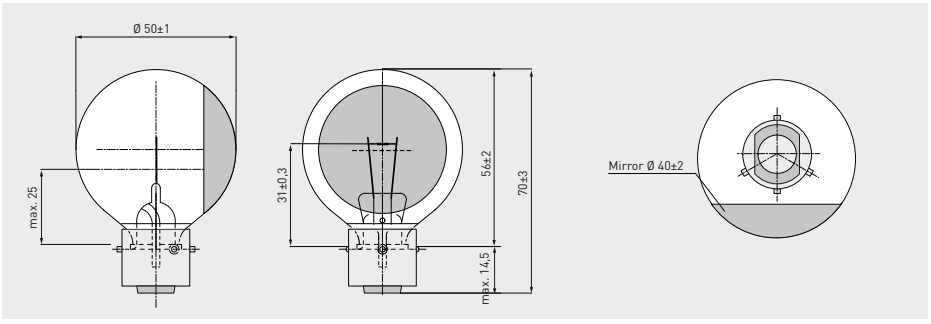
For special features, specific benefits and areas of use see page 45



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9210 592 14522	8V 3W B21s-4 CL / T25	8	3		B21s-4	26	64	31	14	4,000			10



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9228 319 19522	19V 40W B21s-4 CL /SPH50	19	40		B21s-4	51	73	31	360	2,000			10



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9228 320 14422	19.4V 25W B21s-4 CL / SPH50	19.4	25		B21s-4	51	73	31	220	2,000			10

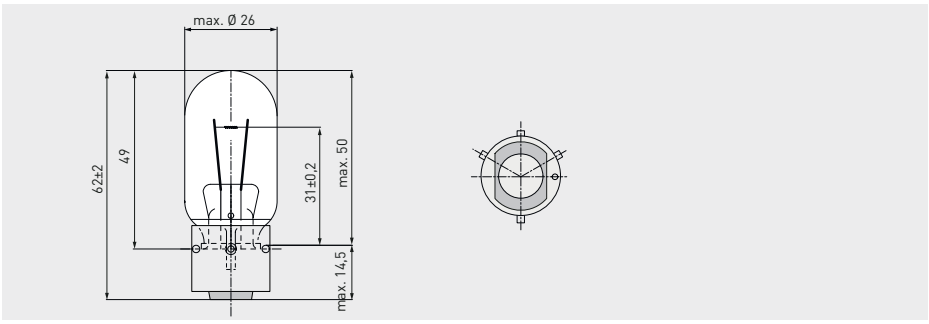
Signal lamps for the French railways

For railway traffic signals

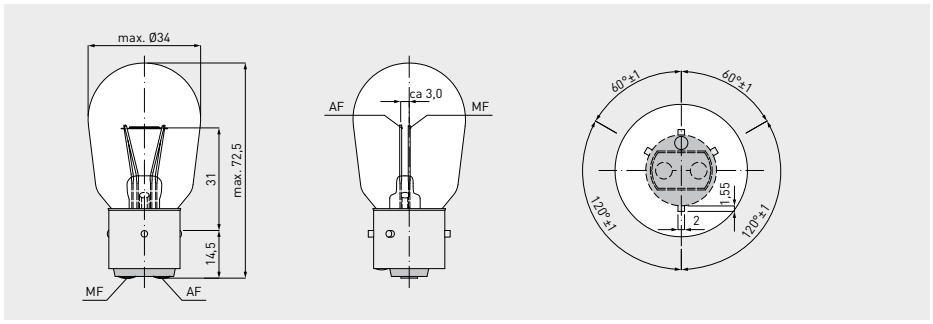
Special features:
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated cap

Areas of use:
- railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9210 554 06922	4.3V 1.5W B21s-4 CL /T25	4.3	1.5	0.35	B21s-4	26	64	31	7	2,000			10
9210 549 05322	3.6V 0.8W B21s-4 CL /T25	3.6	0.8	0.22	B21s-4	26	64	31	3.6	2,000			10
9210 554 05322	3.6V 1.5W B21s-4 CL /T25	3.6	1.5	0.42	B21s-4	26	64	31	7	2,000			10



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845257	12V 20/20W BA21d-4 34x72.5 clear	12	20/20		BA21d-4	34	72.5	31	150	5,000			

Signal lamps for the Italian railways

For railway traffic signals

Special features:

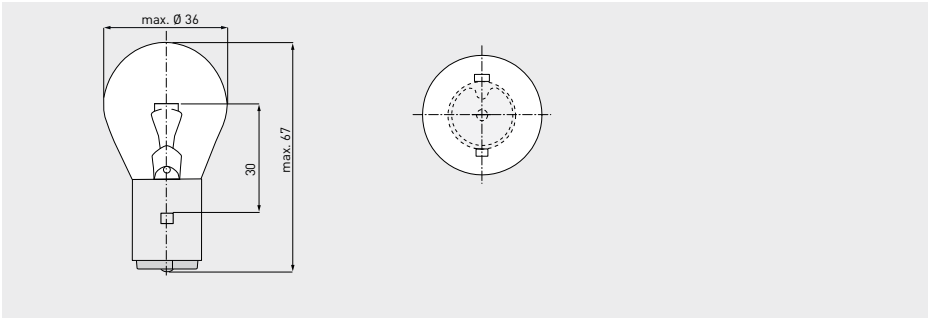
- fulfils the quality requirements of the Italian railway companies
- excess pressure technology, premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- NEW: 12 V, 20 W, Ba20s now also available as a 1-year lamp (must be changed every 12 months)
- NEW: 12 V, 20 W, G4 halogen now also available in long life version

Specific benefits:

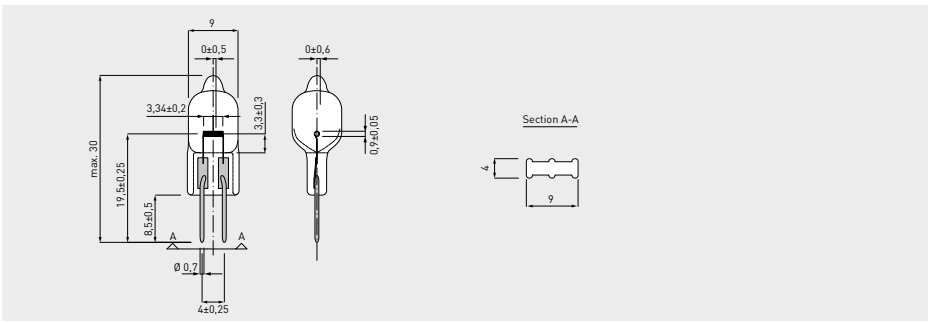
- long life
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to shock and vibration
- corrosion-proof, nickel-plated cap and nickel-plated base contacts to ensure safe electrical contact
- for 12 V, 20 W, G4 halogen: virtually constant luminous flux for its entire life

Areas of use:

- Railway traffic signals (lamps with a transversal filament must be placed vertically to the luminary axis)



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842862	12V 20W Ba20s 6.000Std.	12	20		Ba20s	36	67	30	230	6,000	4,500		200
00842863	12V 20W Ba20s 8.800Std.	12	20		Ba20s	36	67	30	220	14,000	8,800		200

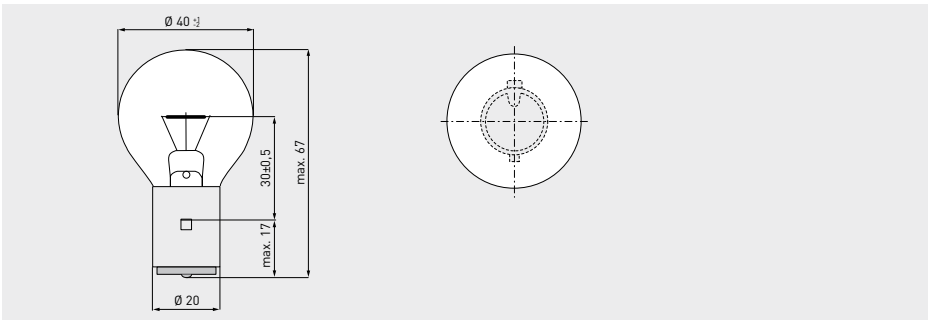


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
00847091	12V 20W G4	12	20		G4	9	30	19.5	320	2,000	1,500		300
00847891	12V 20W G4	12	20		G4	9	30	19.5	320	4,500	3,000		300

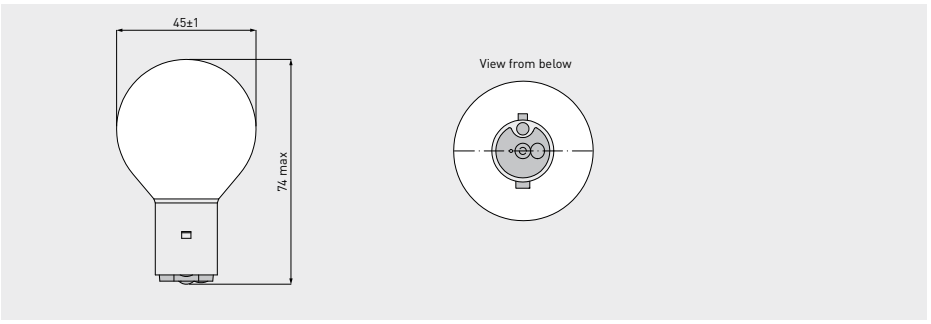
Signal lamps for the Italian railways

For railway traffic signals

For special features, specific benefits and areas of use see page 48



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842434	95V 25W BA20s	95	25		BA20s	40	67	30	200	1,500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00822435	125V 25W BA20s SATINIERT	125	25		BA20s	46	74	35	200	1,000			

Signal lamps for the British railways

For railway traffic signals

Special features:

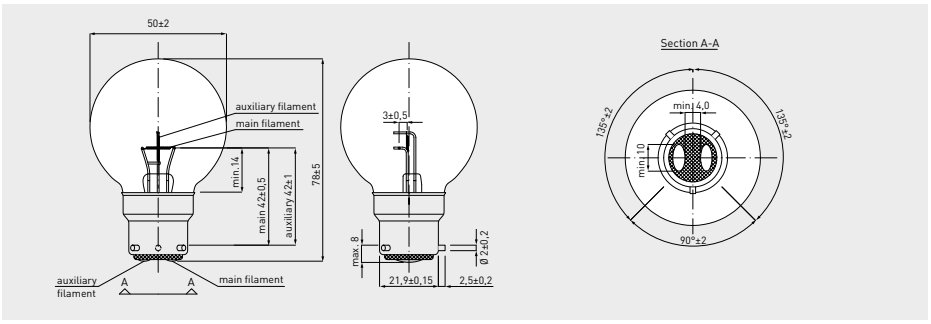
- dual-filament, excess-pressure technology lamps premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

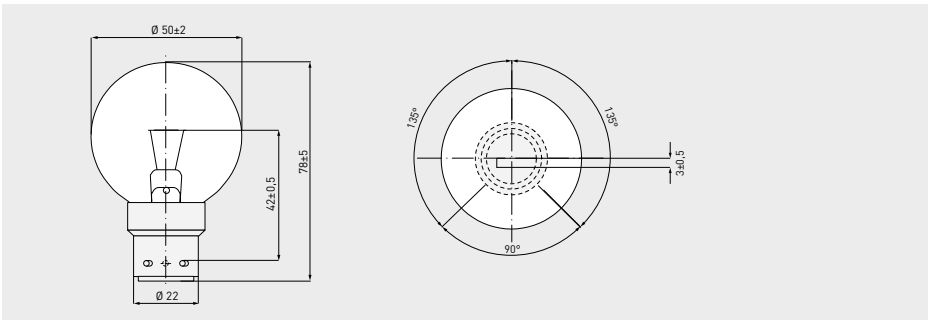
- switches to auxiliary filaments immediately if main filaments should malfunction
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated cap

Areas of use:

- railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842432	12V 24/24W B22d-3	12	24/24		B22d-3	52	83	42	300	1,500			
00842832	12V 24/24W B22d-3	12	24/24		B22d-3	52	83	42	300	5,000			
00842833	12V 24/24W B22d-3	12	24/24		B22d-3	52	83	42	300	8,000			
00842522	12V 25W B22d-3	12	25		B22d-3	52	83	42	200	1,000			
00842440	50V 25/25W B22d-3	50	25/25		B22d-3	52	83	42	330	1,500			
00842840	50V 25/25W B22d-3	50	25/25		B22d-3	52	83	42	280	5,000			

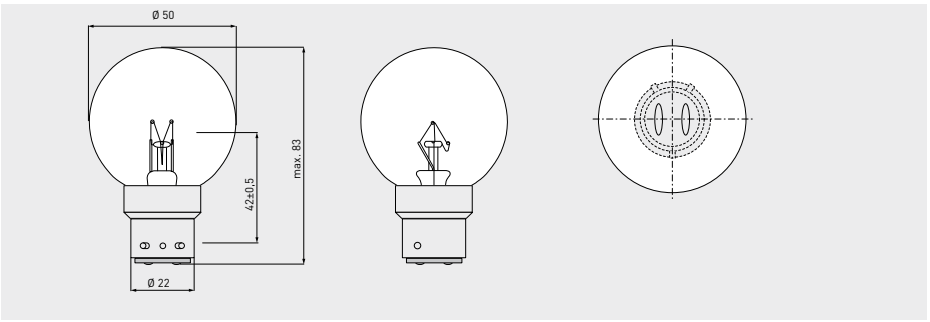


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842488	12V 24W B22d-3	12	24		B22d-3	52	83	42	290	1,000			

Signal lamps for the British railways

For railway traffic signals

For special features, specific benefits and areas of use see page 50



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842454	110V 25W B22d-3	110	25		B22d-3	50	83	42	122	1,000			
00842854	110V 25W B22d-3 50x83	110	25		B22d-3	50	83	42	122	8,000			

Signal lamps for the Belgian railways

For railway traffic signals

Special features:

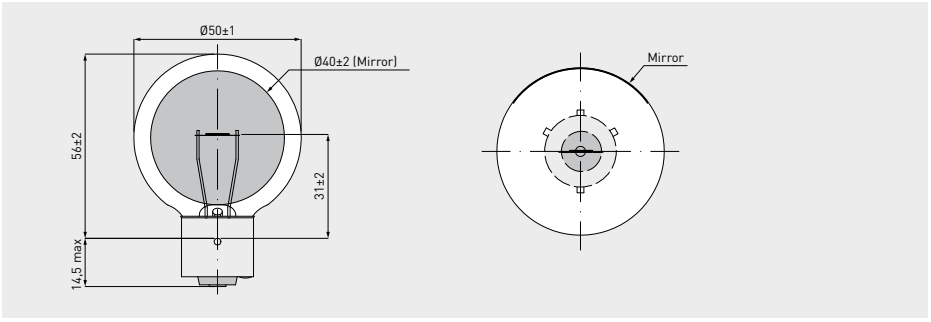
- fulfils the quality requirements of the Belgian railway (Infrabel)
- excess pressure technology premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

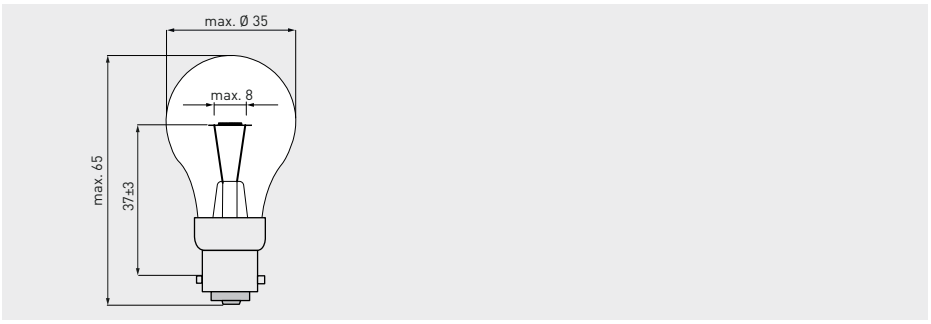
- long life
- high resistance to outside influences, shock and vibration

Areas of use:

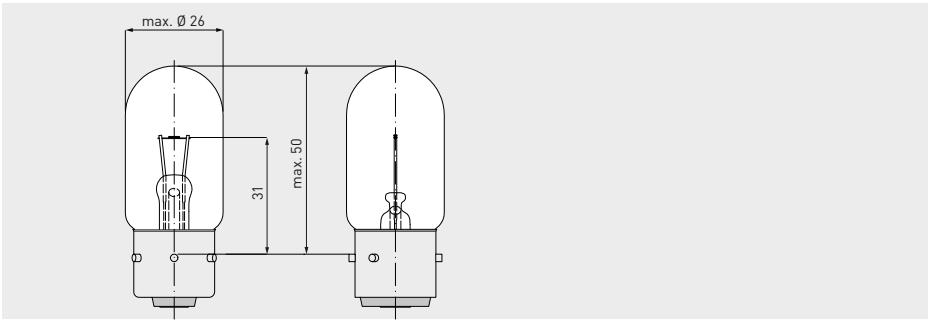
- Railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842499	10V 20W BA21s4	10	20		BA21s-4	51	70	31	min. 200	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842498	24V 5W BA15d/24x17	24	5		BA15d	35	65	37	min. 25	4,000			

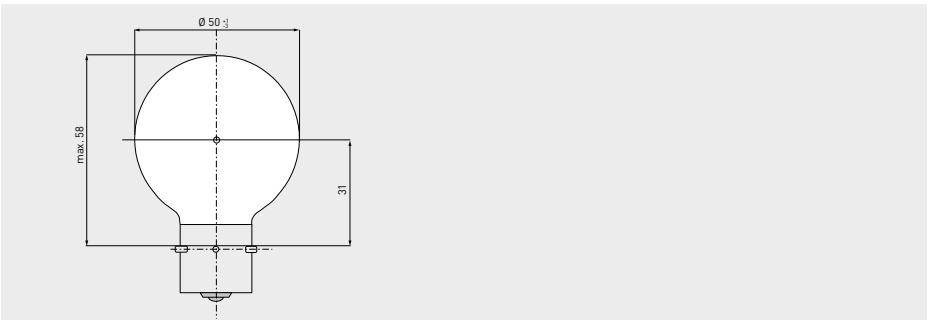


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842496	24V 5W BA21s4	24	5		BA21s-4	26	64	31	min. 27	4,000			

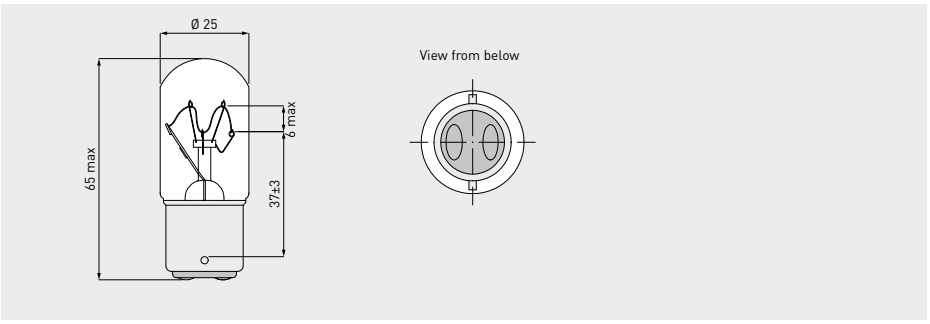
Signal lamps for the Belgian railways

For railway traffic signals

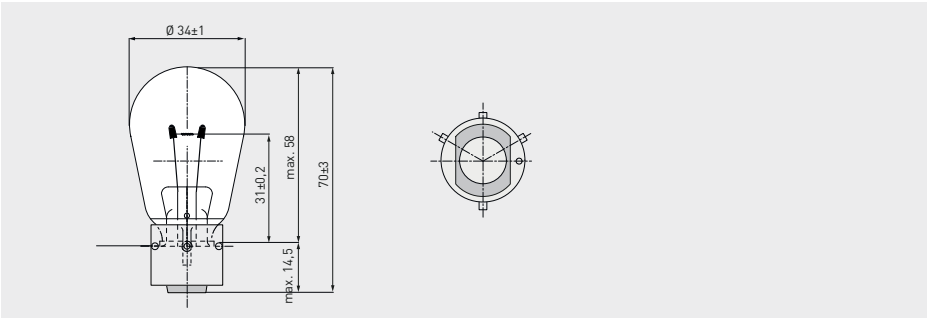
For special features, specific benefits and areas of use see page 52



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00843051	40V 20W BA21s4	40	20		BA21s-4	51	73	31	min. 140	4,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842497	110V 5W B22d/22	110	5		B22d	25	65	37	min. 24	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842373	7.2V 15W B21s-4 CL / P34	7.2	15		B21s-4	35	73	31	110	4,000			10

Signal lamps for the Bulgarian railways

For railway traffic signals

Special features:

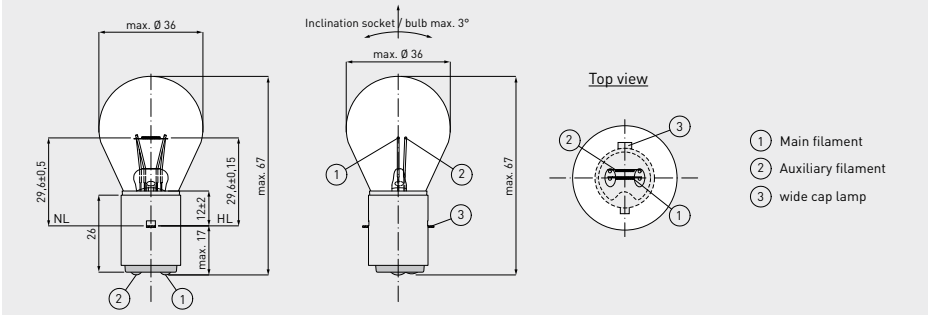
- excess pressure lamps with dual-filament technology
  premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:

- the auxiliary filaments kick in immediately if the main filaments malfunction
- high resistance to shock and vibration
- corrosion-proof, nickel-plated cap and nickel-plated base contacts to ensure safe electrical contact

Areas of use:

- Railway traffic signals



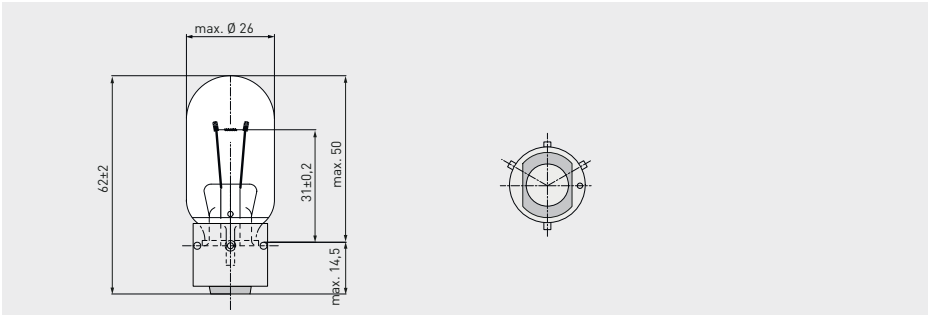
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842568	12V 15/15W BA20d/26 35x67 clear	12	15/15	1.25	BA20d	36	67	29.6	240	600	420		200

Further railway lamps
For railway traffic signals

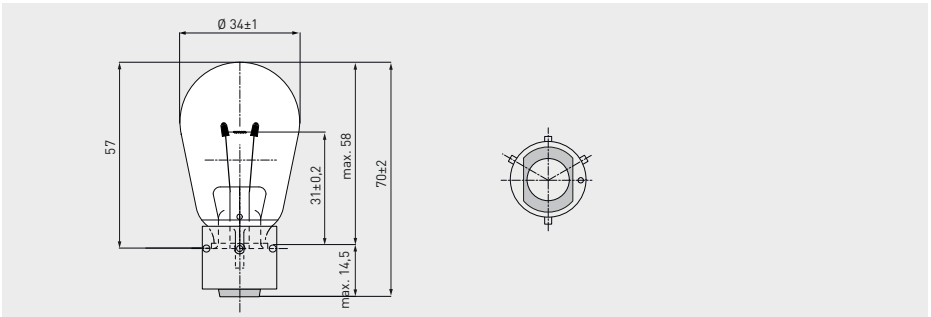
Special features:
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated cap

Areas of use:
- Railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9245 223 14522	8V 2W Ba21s-4 CL / T25	8	2	0.25	B21s	26	64	31	9.3	4,000			10

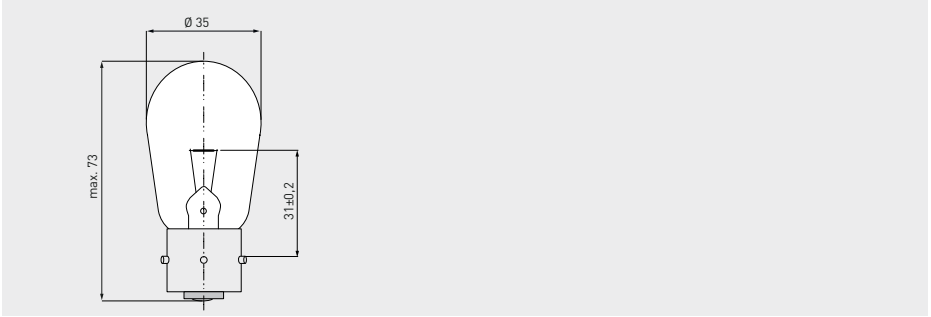


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9228 313 14122	7.7V 6W Ba21s-4 CL / P34	7.7	6	0.78	B21s	35	72	31	33	4,000			10

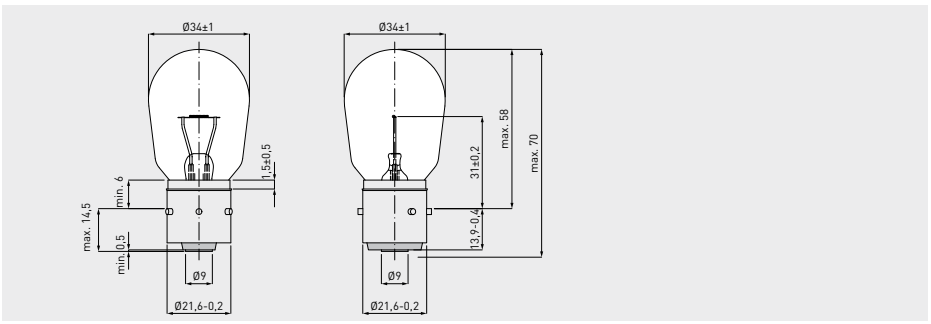
Further railway lamps

For railway traffic signals

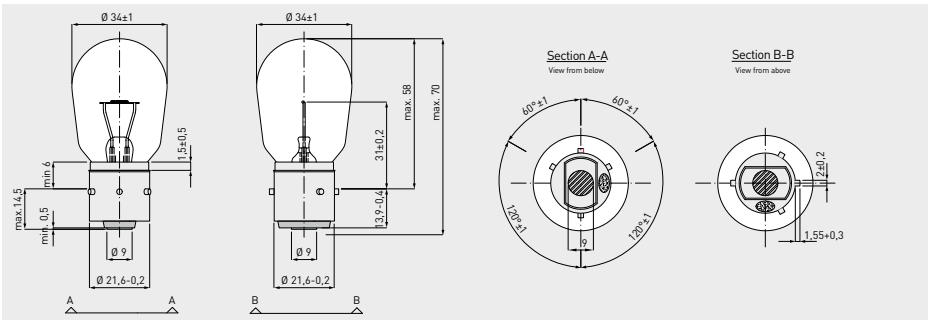
For special features, specific benefits and areas of use see page 55



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842535	24V 15W Ba21s-4 S.34x58 clear	24	15		B21s-4	35	73	31	170				
00946061	24V 20W Ba21s-4	24	20		B21s-4	35	73	31	110				



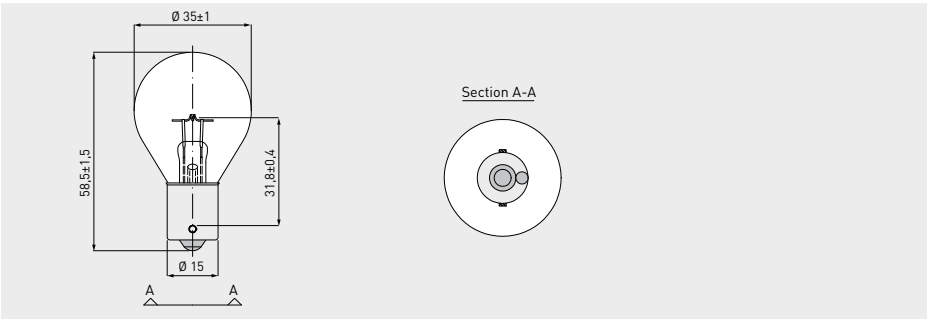
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842555	40V 20W BA21s4 P 34x73 clear	40	20		B21s-4	35	70	31	140	4,000			



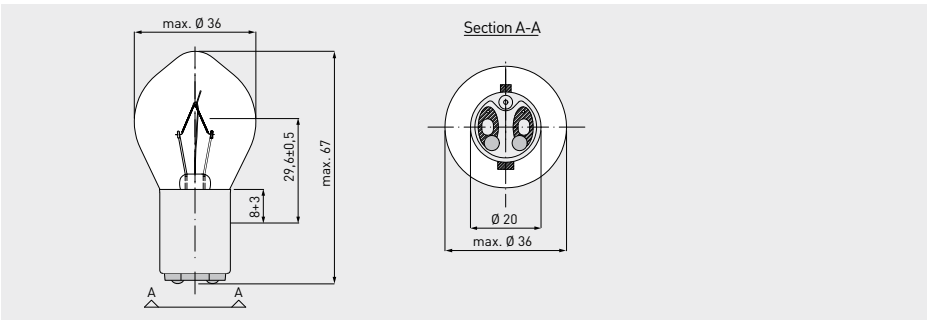
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842517	7.2V 25W Ba21s-4	7.2	25		Ba21s-4	35	70	31	180	4,000			

Further railway lamps
For railway traffic signals

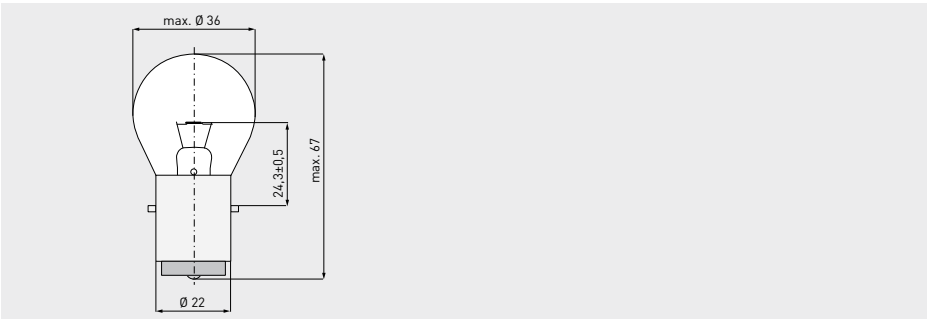
For special features, specific benefits and areas of use see page 55



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842495	10V 25W BA15s/19 CC6 S11	10	25		BA15s	36	60	31.8	380	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842553	32V 25W BA20d/26 35x67 clear	32	25		BA20d	36	67	29.6	350	600			



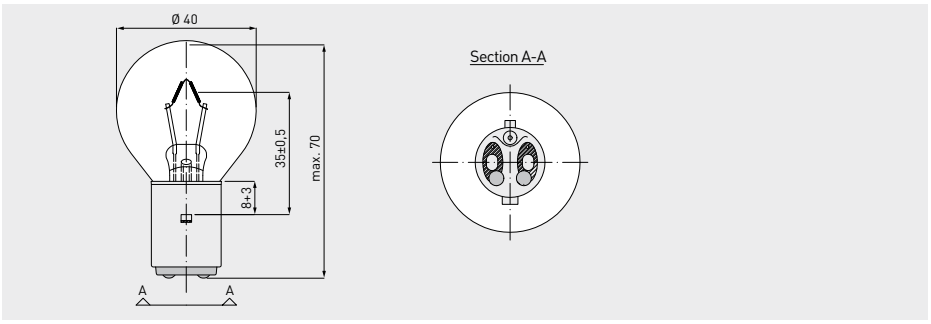
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842012	24V 35W BX22d/32	24	35		BX22d	36	67	24.3	540	500			

Further railway lamps

For railway traffic signals

For special features, specific benefits and areas of use see page 55

Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842557	24V 40W B22d/25x26 S.45x67.5	24	40		B22d	45	67.5		450	300			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842554	32V 100W BA20d/26 40x70 clear	32	110		BA20d	40	70	35	1,700	600			

Further dual-filament technology railway lamps

For railway traffic signals

Special features:

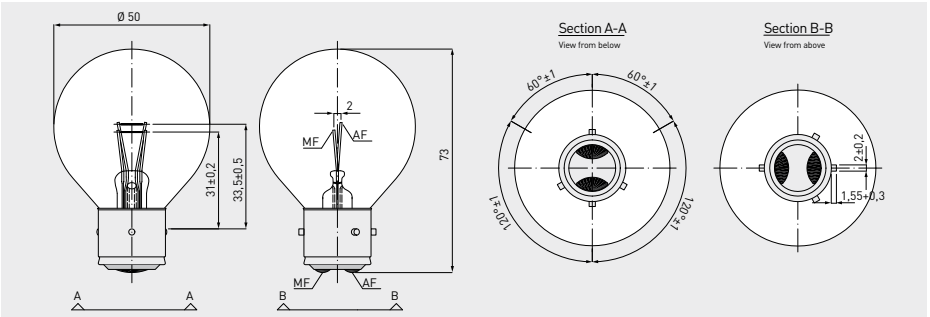
- Excess pressure lamps with dual-filament technology
  premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

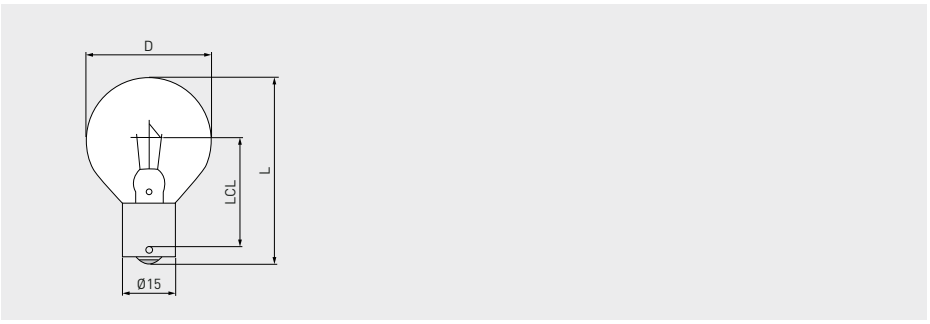
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated cap

Areas of use:

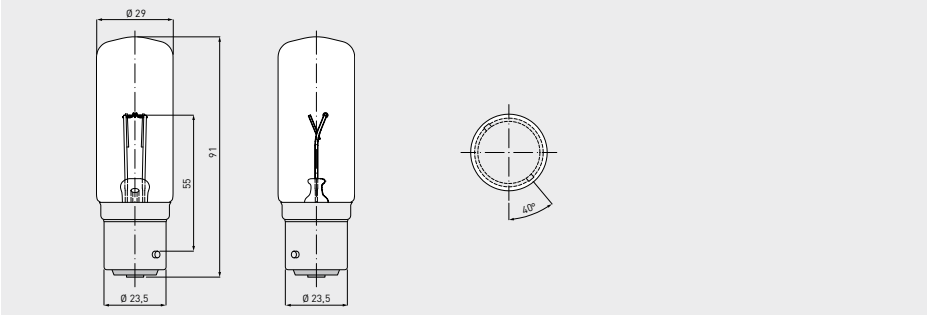
- Railway traffic signals



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842573	7.5V 10/10W Ba21d-4 S.50x73 clear	7.5	10/10		Ba21d-4	50	73	33.5/31	85/85	2,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842401	10V 13/3.5W Ba15s	10	13/3.5		BA15s	35	58	32	221	1,000			

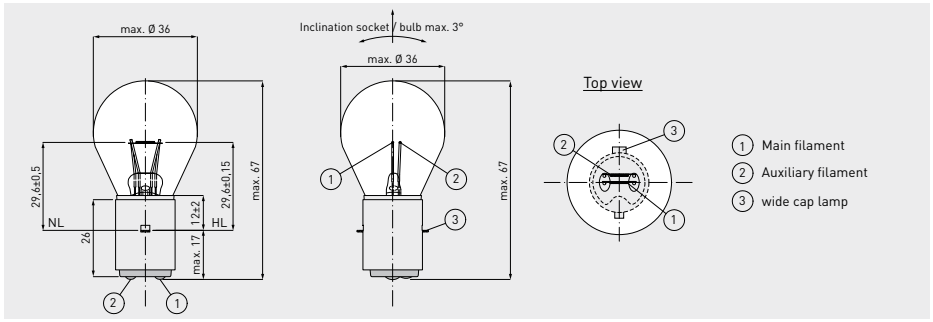


Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842403	10V 18/3.5W P24s	10	18/3.5		P24s	29	91	55	230	500			

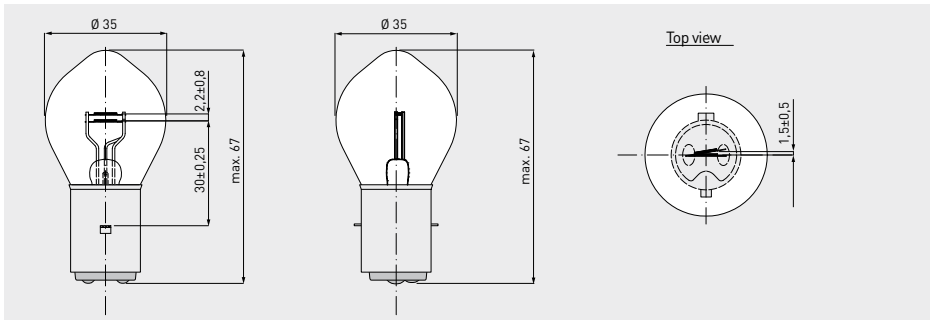
Further dual-filament technology railway lamps

For railway traffic signals

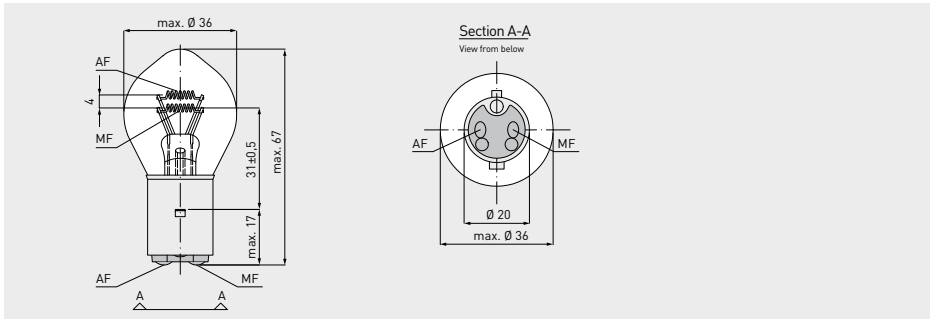
For special features, specific benefits and areas of use see page 59



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842590	10.8V 20/20W BA20d 30x67 clear JL	10.8	20/20	1,8	BA20d	36	67	29.6	290	8,800		S135	



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842570	40V 20/20W BA20d/26 35x67 clear	40	20/20	0.5	BA20d	35	67	30	225	600	420		

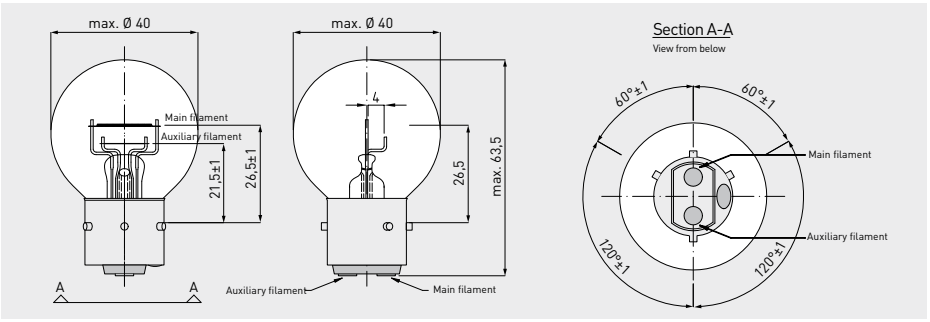


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842337	30V 35/35W BA20d	30	35/35		BA20d	36	67	31	480	200			
00842147	24V 60/60W BA20d (35mm- bulb)	24	60/60		BA20d	36	67	31	800	8,000	3,000		200
00842252	24V 35/35W BA20d	24	35/35		BA20d	36	67	31	565	1,000			

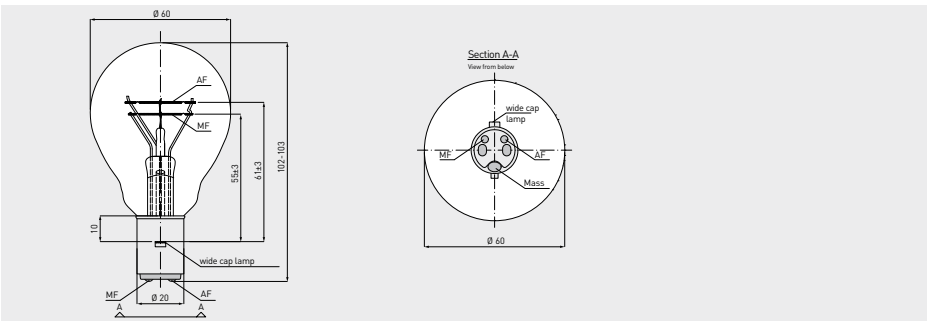
Further dual-filament technology railway lamps

For railway traffic signals

For special features, specific benefits and areas of use see page 59



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844074	30V 50/18W BA21d4	30	50/18		BA21d-4	40	63.5	26.5/21.5	600/120				



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842093	24V 60/60W BA20d (60mm- bulb)	24	60/60		BA20d	60	102-103	55/61	880	2,000			48

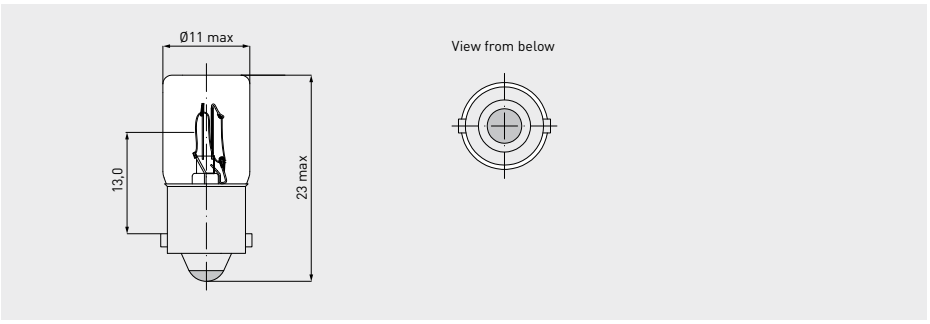
Standard wagon lamps
For railway vehicles

Standard wagon lamps
For railway vehicles

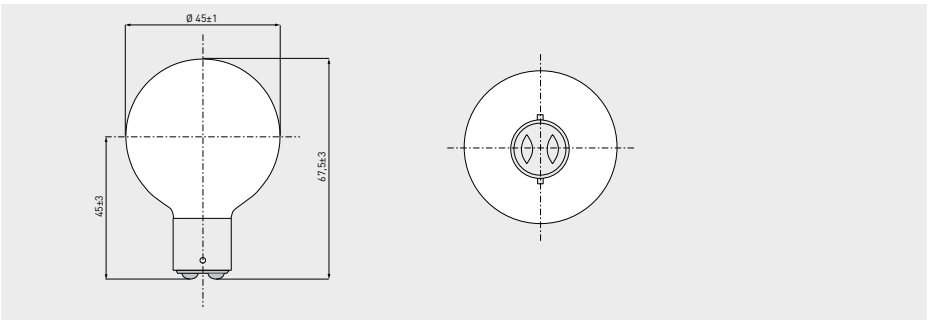
Special features:
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- premium-quality inert gas filling
- available in transparent and matt versions

Specific benefits:
- very robust, high resistance to shock and vibration
- no flickering
- corrosion-proof, nickel-plated cap

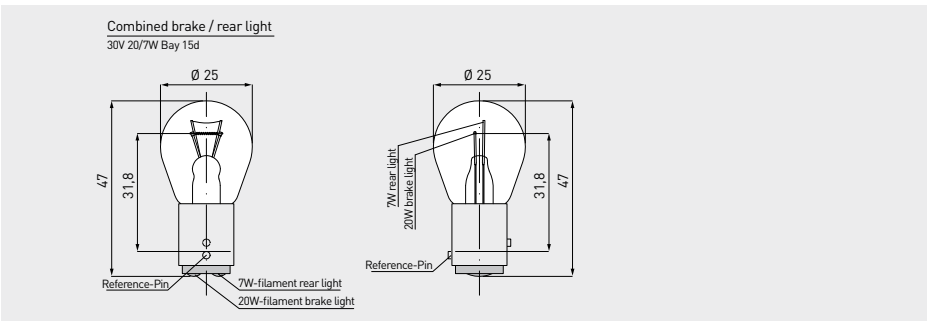
Areas of use:
- light signals in cabins and wagons
- reading lamps
- internal wagon lighting



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845269	24V 3W BA9S/10	24	3		BA9S/10	11	23	13.0					



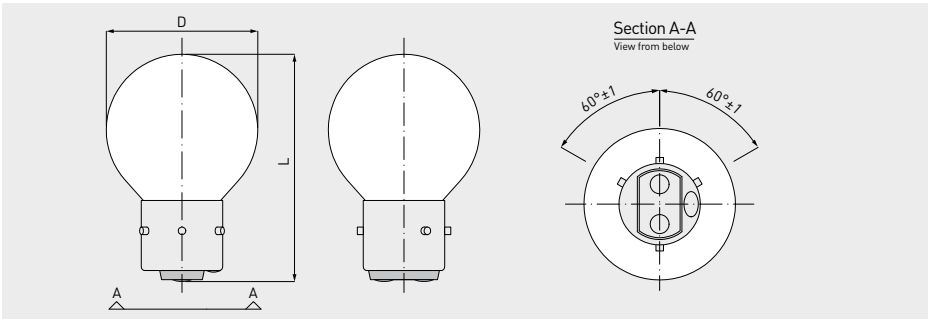
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845305	24V 25W B22d S.45x67.5 clear	24	25		B22d	46	70.5	45	252	300			



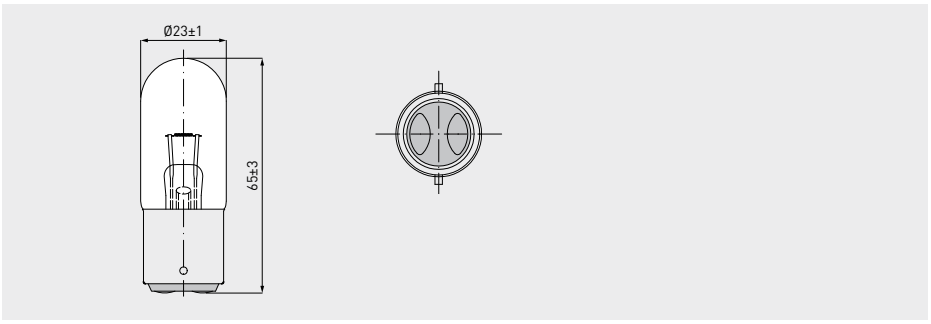
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842313	30V 20/7W BAY15d	30	20/7		BAY15d	25	47	31.8	320/40				

Standard wagon lamps
For railway vehicles

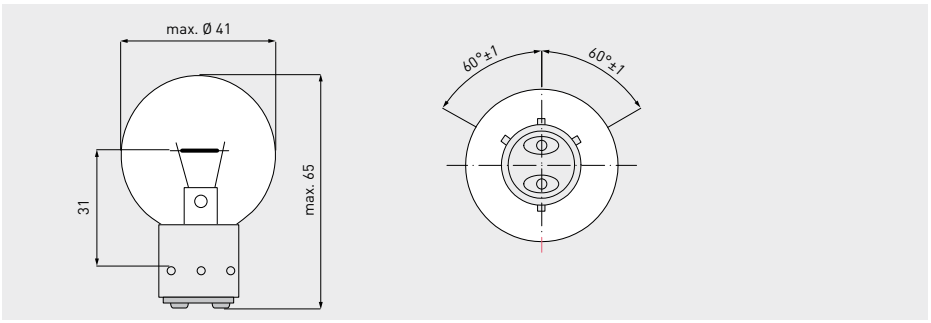
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845289	24V 25W BA21d4 S40x60 matt	24	25		BA21d-4	41	63		250	500			
00845318	24V 60W BA21d4 45x67 matt	24	60		BA21d-4	45	67		725	500			
00842509	85V 40W BA21d-4 matt	85	40		BA21d-4	41	63		416	500			
00842504	30V 40W BA21d4 40x60 matt	30	40		BA21d-4	41	60		540	500			



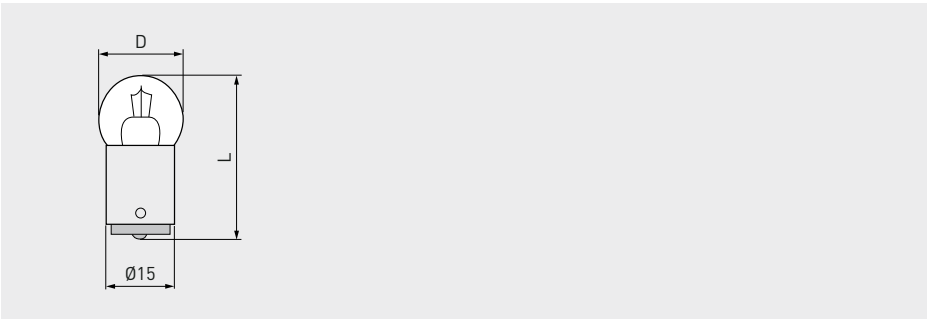
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845300	24V 25W B22d/22 T.23x65 clear	24	25		B22d/22	24	68		243	800			



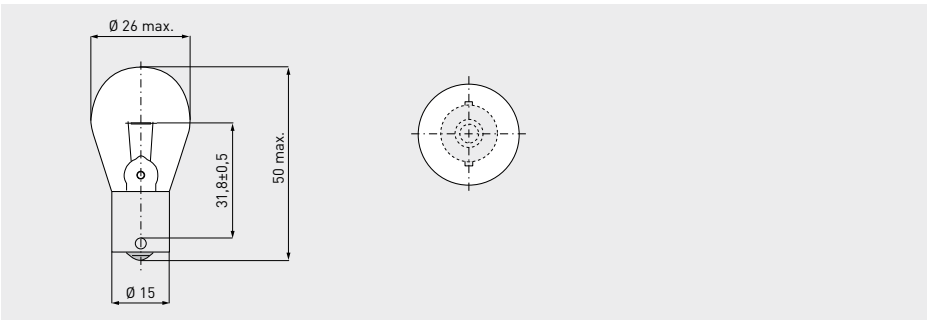
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842514	24V 36/36W BA21d4 S40x65 clear	24	36/36		BA21d-4	41	65	31	430	1,000			

Standard wagon lamps
For railway vehicles

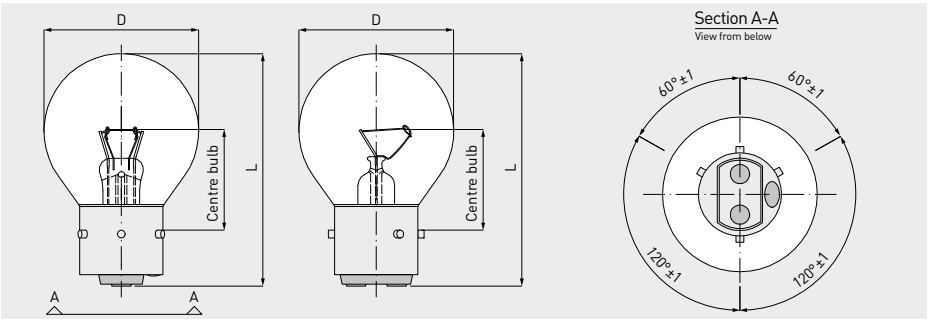
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845074	28V 5W BA15d	28	5		BA15d	18	35		30	1,500			
00845076	28V 12W BA15d	28	12		BA15d	18	35		130	1,500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845262	28V 21W BA15s	28	21		BA15s	26	50	31.8	150	1,000			

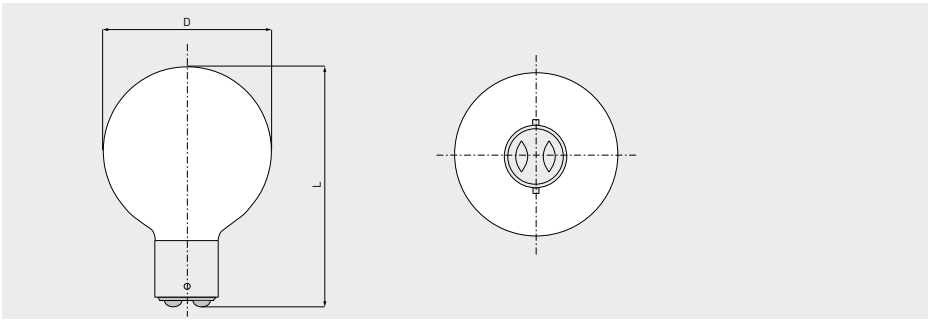


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845288	28V 45W BA21d-4 S40x63.5 clear	28	45		BA21d-4	41	63.5		550	2,000			
00842534	85V 40W BA21d4 S 40x60 clear	85	40		BA21d-4	41	60		416	500			

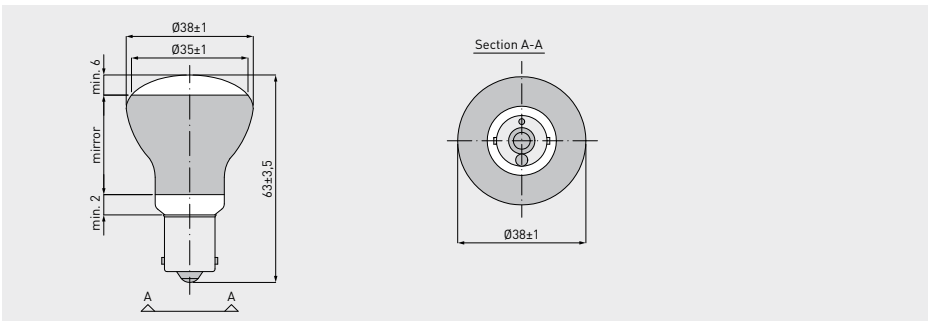
Standard wagon lamps

For railway vehicles

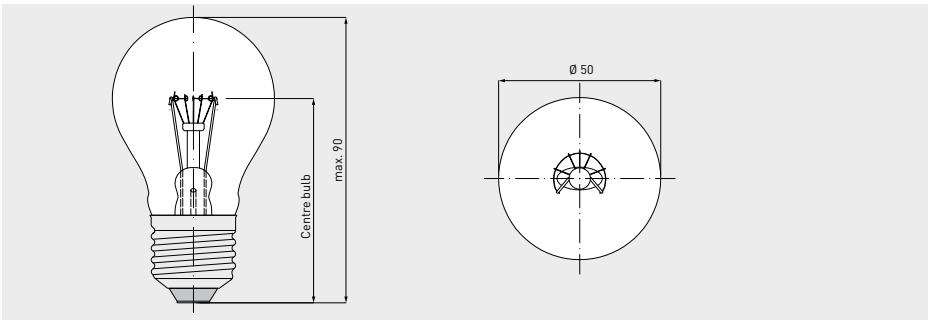
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845308	30V 40W B22d 45x67.5 matt	30	40		B22d	46	72.5		430	300			
00822588	85V 40W B22d/25x26 S45x67.5 matt	85	40		B22d	46	67.5		416	500			



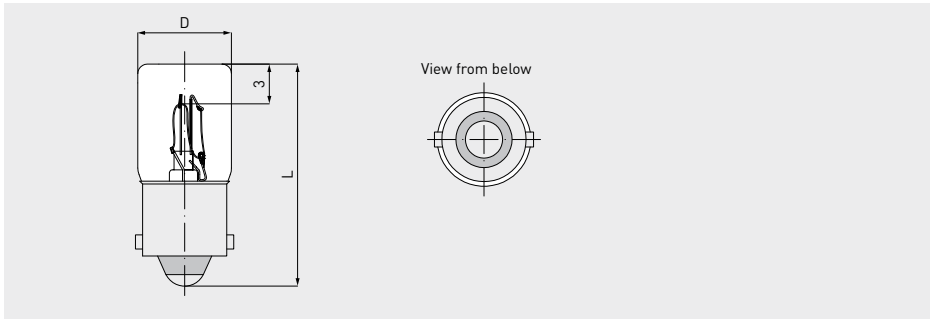
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9245 646 22422	32V 20W BA15s/19 R12	32	20		BA15s	39	66.5	NA	NA	300			10



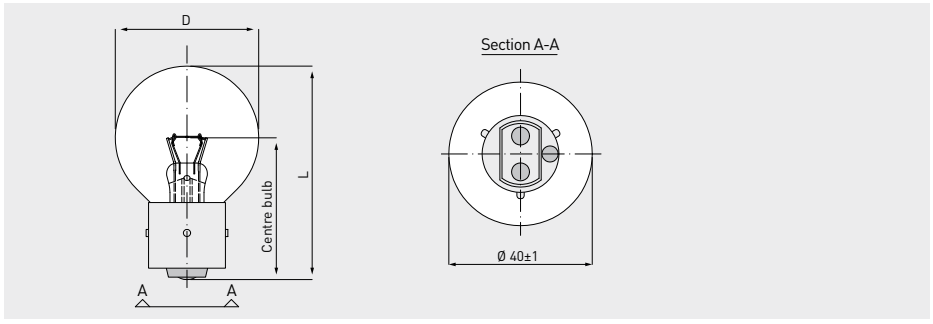
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00825299	75V 40W E27 50x90 matt	75	40		E27	50	90		480	2,000			

Standard wagon lamps
For railway vehicles

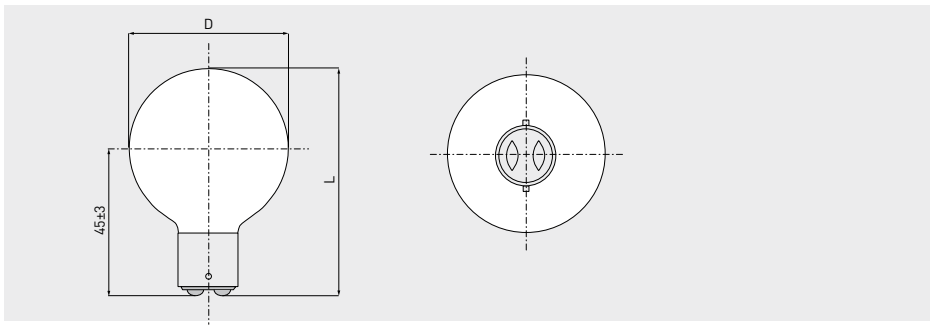
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842503	85V 2.7W BA9s/10 10x28 clear	85	2.7		BA9s/10	11	28		7	1,000			
00845296	85V 2.7W BA9s/13 10x23 clear	85	2.7		BA9s/13	11	23		7	1,000			



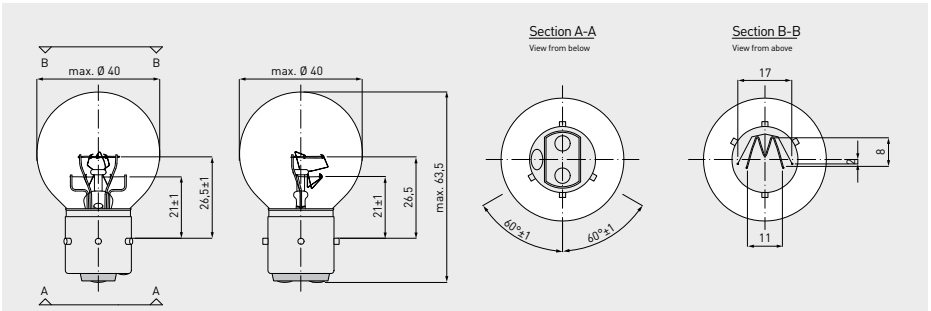
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842574	85V 40W BA21d-3 clear 40x60	85	40	0.47	BA21d-3	41	63		416	500			
00845294	85V 75W Ba21d-4 60x83 clear	85	75		BA21d-4	60	80		780	500			



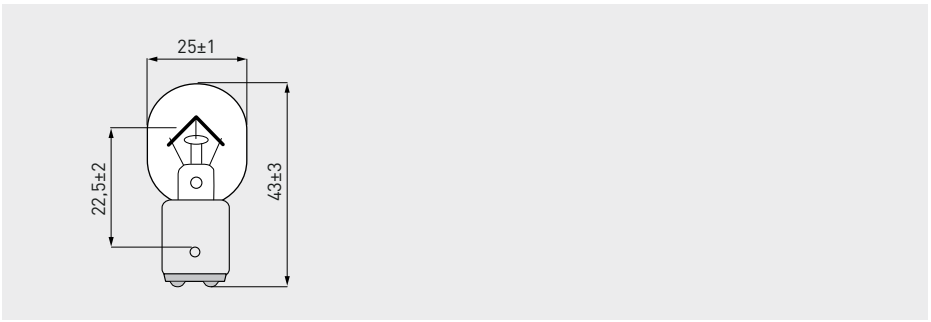
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842501	85V 25W B22d 45x67.5 clear	85	25		B22d	46	72	45	195	500			
00842536	85V 40W B22d/25x26 S45x67.5 clear	85	40		B22d	46	67.5	45	416	500			

Halogen wagon lamps
For railway vehicles

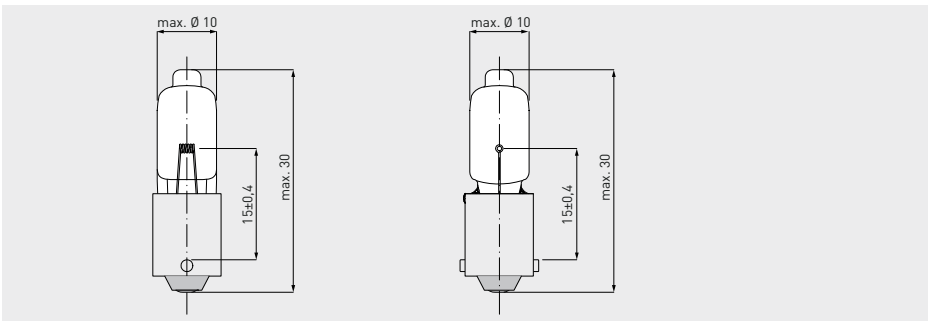
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842502	85V 50/18W BA21d4	85	50/18	0.59/0,21	BA21d4	40	63.5	26.5/21	600/120	500/300			
00844075	95V 50/18W BA21d4	95	50/18		BA21d-4	40	63.5	26.5/21	600/120	500/300			
00843019	130V 50/18W BA21d-4	130	50/18		BA21d-4	40	63.5	26.5/21	450/60	500/300			



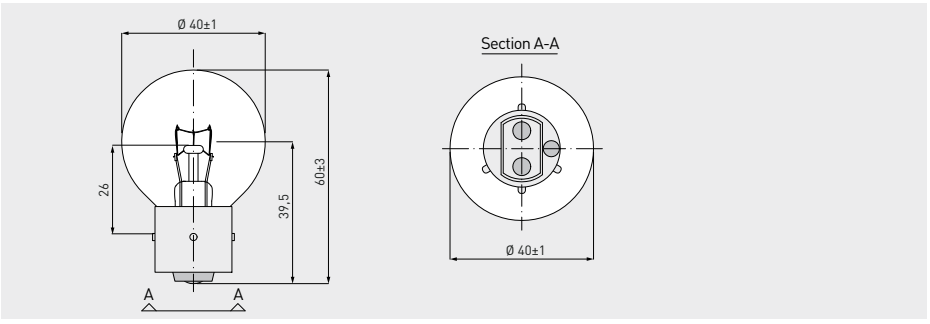
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842505	95V 10W BA15d	95	10	0.11	BA15d	26	46	22.5	77	500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847124	28V 11.5W BA9s/13 Halogen	28	11.5	0.41	BA9s	10	30	15	160	2,000			

Standard wagon lamps
For railway vehicles

For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842506	110V 40W BA21d-4	110	40	0.36	BA21d-4	41	63	26	400	500			
00845306	130V 50W Ba21d-4 40x60 clear	130	50	0.38	BA21d-4	41	63	26	600	1,000			

Light and water

The origins of light signals for seafaring are the light fires for marking harbour entrances and dangerous spots. They served as approximate points of orientation for coastal shipping. Initially, it was a simple, large fire positioned so it could easily be seen from the sea, a land fire. It was not until much later that lighthouses and the so-called fire ships that were equipped with open fires (tar) or torches.
As long ago as 300 BC, large, famous light fires were burning to show ships the way: the Pharos of Alexandria and also the Colossus of Rhodes. Light fires and lighthouses for seafaring remained the same for many centuries. To this day there are still old lighthouses to be found along the old shipping routes on the coast that were built for this purpose.

The distance from which an illuminated object can be seen is about twice as great as for non-illuminated objects, even during the day. Lighting particularly improves visibility in gloomy weather. The development of the Fresnel lens in 1822 brought a decisive breakthrough in light yield and improved the effects of lighthouses and beacon fires – and of ship and other lamps.
Light is still an important signal provider at sea. Lighthouses send out their light signals and fire ships, in addition to radar and sonar, also send out light signals with their beacon fires. In coastal areas, light buoys are irreplaceable as shipping signals.

One important step with increasing sea traffic was the introduction of ship position lamps. They are prescribed and precisely defined according to the "International Rules of 1972 for the prevention of collisions at sea" (KVR).

Today, inland shipping in particular is no longer imaginable without light signals. Whether it is lock traffic lights, light signals, board lights or signal lights, fires, fixed lights or rhythmic lights: signal lamps for seafaring have many purposes.

DR FISCHER manufactures signal lamps for use by and on the water, ranging from standard lamps for regulating shipping traffic to custom-specific designs such as lighthouse lamps.

Standard lamps

For maritime and lock traffic lights

Special features:

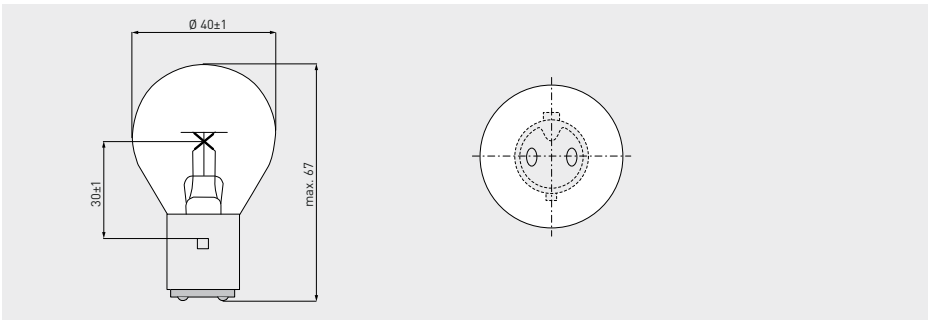
- precision of manufacture, minimum tolerances in the positioning of the filaments
- flat-core coils (article nos. 842466 and 842866)
- premium-quality inert gas filling
- compact luminary
- corrosion-proof, nickel-plated cap
- also available as dual-filament lamps with safety threads

Specific benefits:

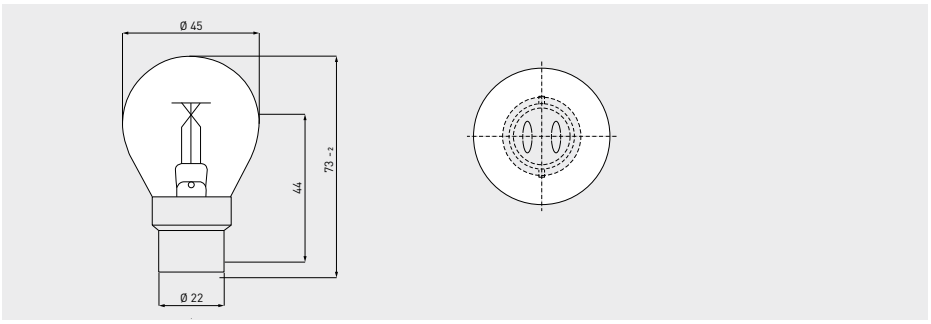
- high resistance to shock and vibration
- nickel-plated base contacts to ensure safe electrical contact
- in the dual-filament lamp, the auxiliary filaments kick in immediately if the main filaments malfunction

Areas of use:

- maritime light signals
- lock traffic lights



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842157	10.3V 0.194A/0.194A (2/2W) BA20d	10.3	2/2	0.194	Ba20d	40	67	30	16-18	1,500			
00842152	10.3V 0.485A/0.485A BA20d	10.3	5/5	0.485	Ba20d	40	67	30	55	1,500			
00842492	10.3V 5/5W BA20d	10.3	5/5		Ba20d	40	67	30	55	1,500			
00842250	12V 2/2W BA20d	12	2/2		Ba20d	40	67	30	12	3,500			

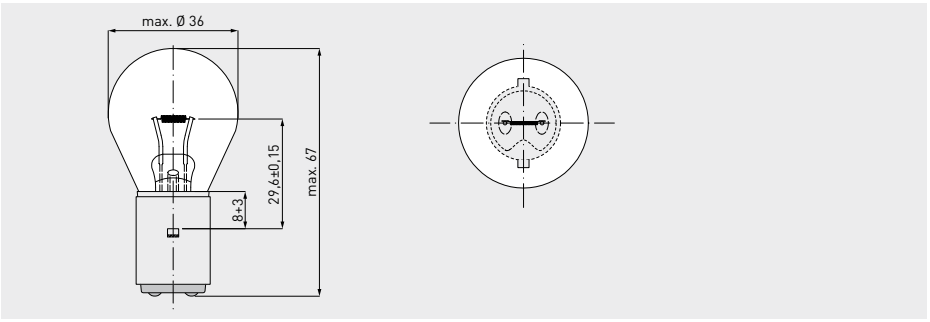


Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842375	10.3V 10/10W Special cap	10.3	10		Pre cap	45	73	44	140	1,500			

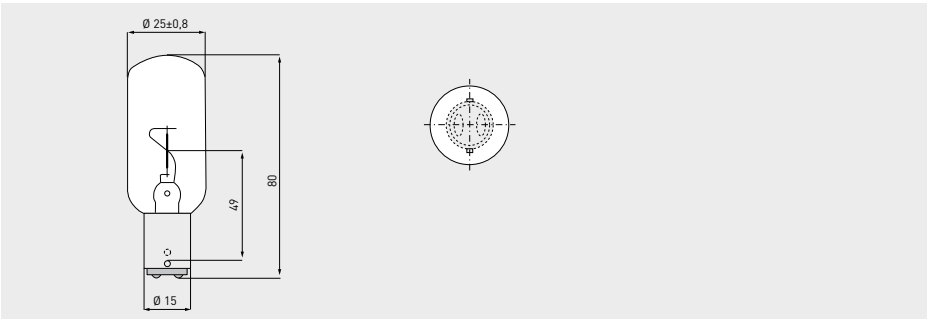
Standard lamps

For maritime and lock traffic lights

For special features, specific benefits and areas of use see page 72



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842866	12V 55W BA20d LL 900lm 3000h	12	55	4.58	Ba20d	36	67	29.6	900	3,000			
00842466	12V 55W BA20d 1000lm 1000h	12	55	4.58	BA20d	36	67	29.6	1,000	1,000			200



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842543	28V 25W BA15d	28	25		BA15d	25	80	49	450	1,000			
00842890	28V 40W BA15d/19	28	40		BA15d	25	80	49	650	1,000			

Standard lamps

For maritime and lock traffic lights

Special features:

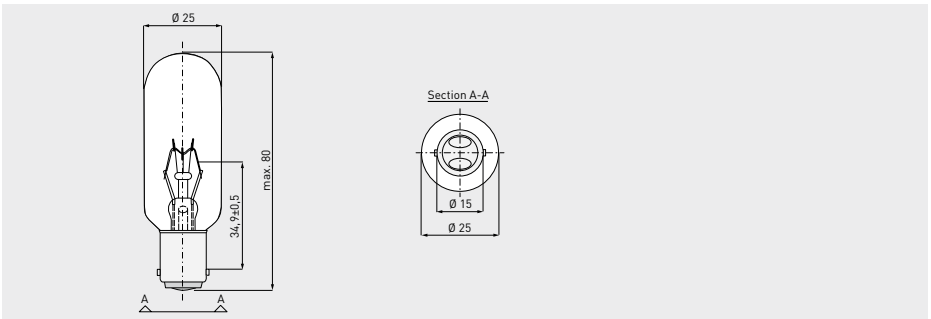
- precision of manufacture, minimum tolerances in the positioning of the filaments
- premium-quality inert gas filling
- compact luminary
- corrosion-proof, nickel-plated cap
- also available as dual-filament lamps with safety threads

Specific benefits:

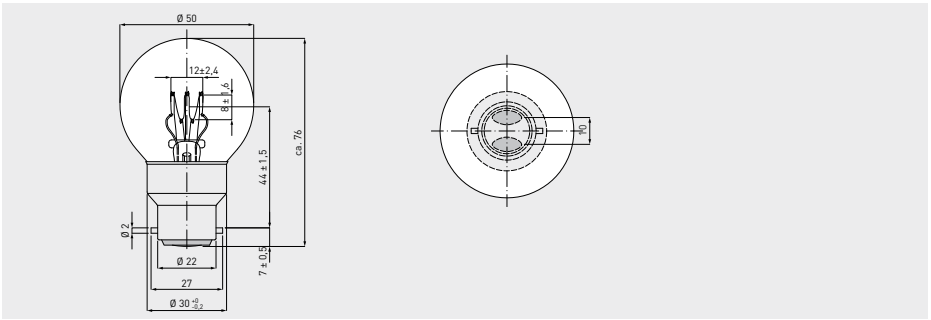
- high resistance to shock and vibration
- in the dual-filament lamp, the auxiliary filaments kick in immediately if the main filaments malfunction

Areas of use:

- maritime light signals
- lock traffic lights



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842564	120V 50W BA15d/19 T.25x80 cc13	120	50		BA15d	25	80	34.9	775	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842050	230V 40W B22d vernickelt	230	40		B22d	50	76	44	250	1,900			

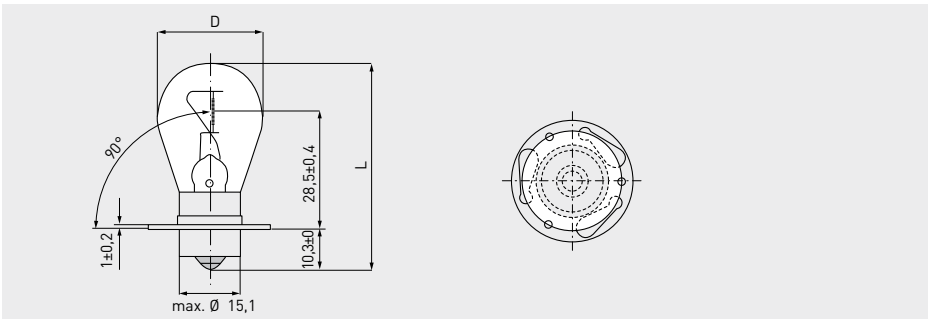
Standard lamps
For light buoys

Standard lamps
For light buoys

Special features:
- precision of manufacture, minimum tolerances in the positioning of the filaments, in particular because of the Prefocus P 30 ring
- premium-quality inert gas filling
- corrosion-proof, nickel-plated cap

Specific benefits:
- long life
- high resistance to outside influences, shock and vibration
- all-round (360°) even luminosity

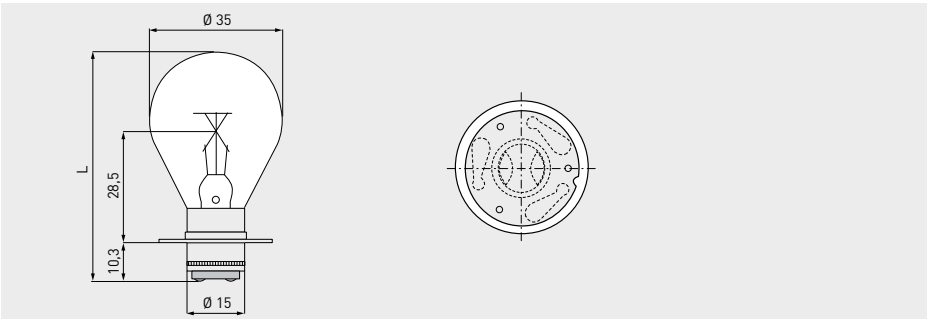
Areas of use:
- light buoys with a solar module
- light buoys with a rotating lamp-changing system for 6 lamps



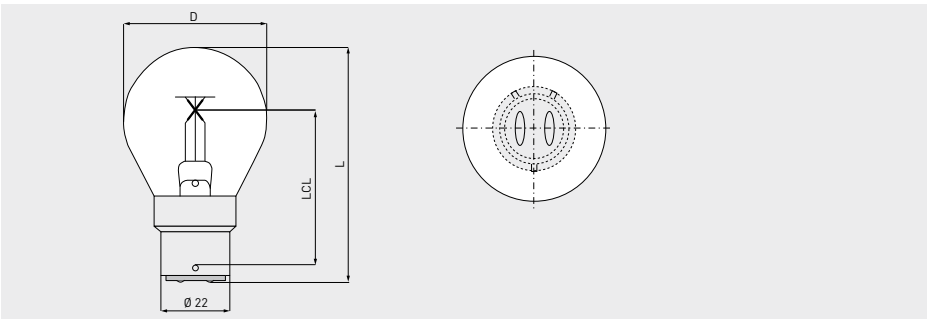
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842058	6.2V 0.25A SX15s w. P30s-ring C8 S8	6.2	1.55	0.25	P30s	26.2	50.8	28.5	10	1,000			
00842059	6.2V 0.46A SX15s w. P30s-ring C8 S8	6.2	2.9	0.46	P30s	26.2	50.8	28.5	29	1,000			
00842060	6.2V 0.70A SX15s w. P30s-ring C8 S8	6.2	4.34	0.7	P30s	26.2	50.8	28.5	50	1,000			
00842061	6.2V 0.92A SX15s w. P30s-ring C8 S8	6.2	6	0.92	P30s	26.2	50.8	28.5	60	1,000			
00842062	6.2V 1.42A SX15s w. P30s-ring C8 S8	6.2	8.68	1.4	P30s	26.2	50.8	28.5	125	1,000			
00842380	6.2V 0.92A SX15s P30s w.ring	6.2	6	0.92	P30s	26.2	50.8	28.5	60	1,000			
00842063	12V 0.25A SX15s w. P30s-ring C8 S8	12	3	0.25	P30s	26.2	50.8	28.5	30	1,000			
00842064	12V 0.55A SX15s w. P30s-ring C8 S8	12	6.6	0.55	P30s	26.2	50.8	28.5	80	1,000			
00842065	12V 0.77A SX15s w. P30s-ring C8 S8	12	9.24	0.77	P30s	26.2	50.8	28.5	130	1,000			
00842067	12V 1.15A SX15s w. P30s-ring C8 S8	12	14	1.15	P30s	26.2	50.8	28.5	220	1,000			
00842068	12V 1.35A SX15s w. P30s-ring C8 S8	12	16.2	1.35	P30s	26.2	50.8	28.5	245	1,000			
00842070	12V 2.03A SX15s w. P30s-ring C8 S8	12	24.36	2.03	P30s	26.2	50.8	28.5	400	1,000			
00842072	12V 3.05A SX15s w. P30s-ring C8 S11	12	36.6	3.05	P30s	35	60.33	28.5	650	1,000			
00842245	12V 5,0A SX15s w. P30s-ring C8 S11	12	60	5.00	P30s	35	58	28.5	900	1,000			

Standard lamps
For light buoys

For special features, specific benefits and areas of use see page 76



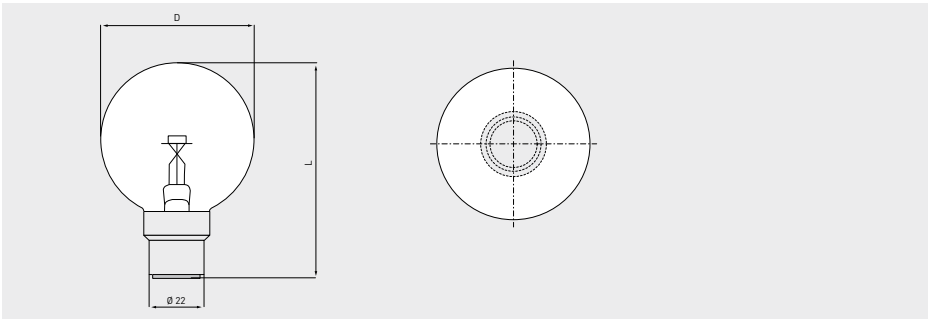
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842242	6.2V 0.25/0.25A P30d	6		0.25/0.25	P30d	35	58	28.5	10	1,000			
00842176	12V 0.55/0.55A S15d/19 P30d C8 S11	12		0.55/0.55	P30d	35	60	28.5	80	1,000			
00842241	12V 0.25/0.25A P30d	12		0.25/0.25	P30d	35	58	28.5	30	1,000			
00842278	12V 10/10W P30d	12	10/10		P30d	35	58	28.5	130	1,000			



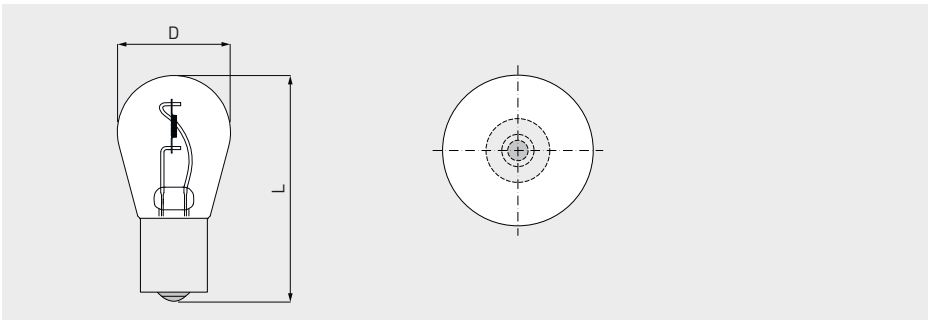
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842028	10.3V 10/10W B22d-3	10.3	10/10		B22d-3	45	73	44	140	1,500			
00842026	10.3V 2/2W B22d-3	10.3	2/2		B22d-3	45	73	44	16	1,500			
00842029	10.3V 20/20W B22d3	10.3	20/20		B22d-3	45	73	44	275	2,000			
00842030	10.3V 40/40W B22d-3	10.3	40/40		B22d-3	60	85	44	700	1,500			
00842027	10.3V 5/5W B22d-3	10.3	5/5		B22d-3	45	73	44	55	1,500			
00842165	10.3V 60/10W B22d-3	10.3	60/10		B22d-3	60	85	44	1,000/140	1,500			
00842031	10.3V 60/60W B22d-3	10.3	60/60		B22d-3	60	85	44	1,000	1,500			
00842308	10.3V 100/100W B22d-3	10.3	100/100		B22d-3	60	85	44	1,900	1,000			
00842452	23.5V 25/25W B22d-2	23.5	25/25		B22d	50	77	44	360	1,500			

Standard lamps
For light buoys

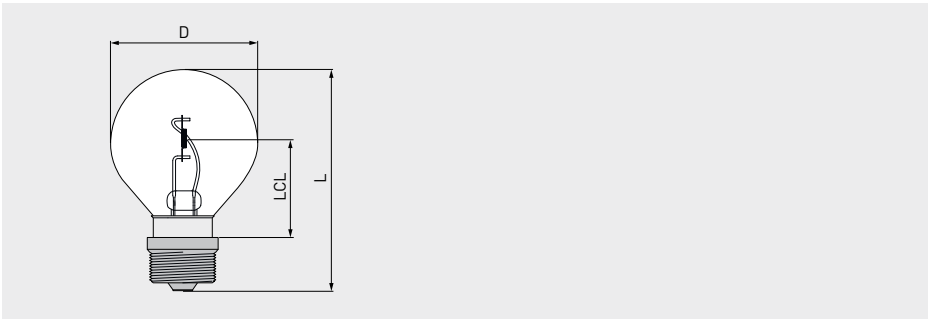
For special features, specific benefits and areas of use see page 76



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842459	10.3V 60/60W Special cap	10.3	60/60		B22d-3	60	85		1,000	1,500			



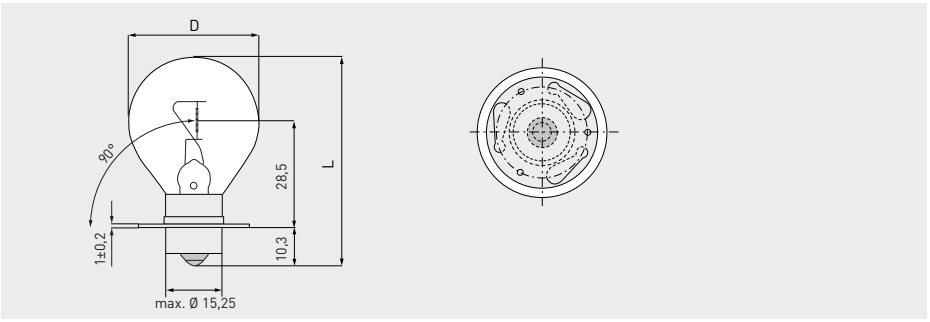
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842421	12V 0.55A SX 15s without ring C8 S8	12	7	0.55	Sx15s	26.2	50.8		80	1,000			
00842423	12V 1.15A SX 15s without ring C8 S8	12	14	1.15	Sx15s	26.2	50.8		220	1,000			
00842424	12V 3,0A SX15s without ring CC8 S11	12	36	3.00	Sx15s	35	58		600	1,000			



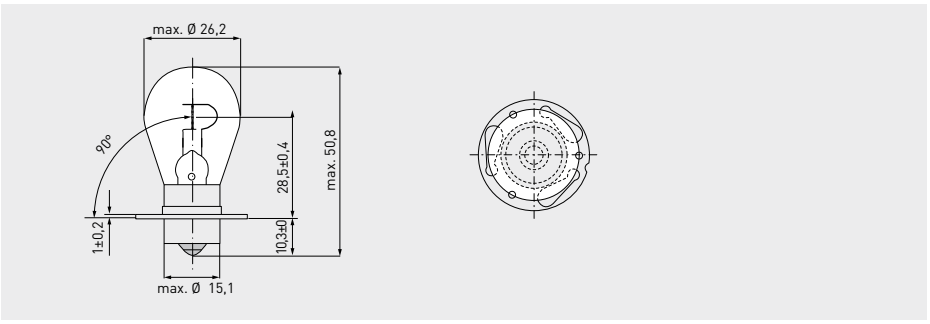
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842426	12V 0.55A with screw thread cap	12	7	0.55	Sx15s	26.2	50	25.3	80	1,000			
00842427	12V 0.77A with screw thread cap	12	9.24	0.77	Sx15s	26.2	50	25.3	130	1,000			
00842428	12V 1.15A with screw thread cap	12	14	1.15	Sx15s	26.2	50	25.3	220	1,000			
00842318	12V 3.0A with screw thread cap	12	36	3.00	Sx15s	35	60	25.3	600	1,000			

Standard lamps
For light buoys

For special features, specific benefits and areas of use see page 76



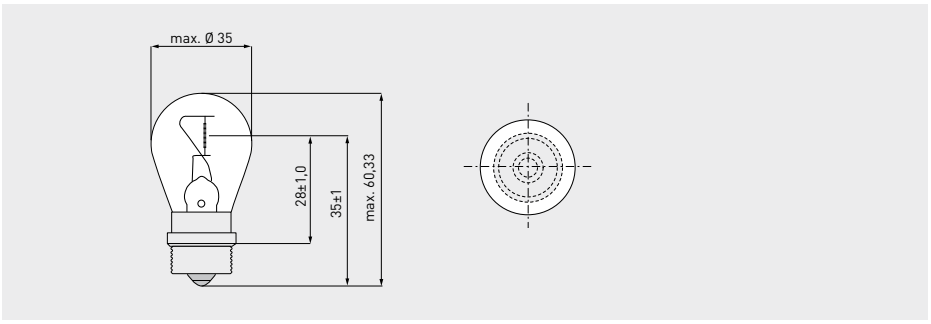
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842258	12V 0.5A SX15s w. P30s-ring CC8 S11	12	6	0.5	P30s	35	58	28.5	85	1,000			
00842128	12V 0.5A SX15s w. P30s-ring.CC8 S8	12	6	0.5	P30s	26.2	50.8	28.5	65	1,000			
00842295	12V 0.5A SX15s w. P30s-ring CC8 S8	12	6	0.5	P30s	26.2	58	28.5	85	1,000			
00842066	12V 1.0A SX15s w. P30s-ring CC8 S11	12	12	1.00	P30s	35	58	28.5	145	1,000			
00842397	12V 1.0A SX15s w.P30s-ring CC8 S8	12	12	1.00	P30s	26.2	50.8	28.5	145	1,000			
00842451	12V 1,9A SX15s w. P30s-ring CC8 S8	12	22.8	1.90	P30s	26.2	50	28.5	390	1,000			
00842069	12V 1,9A SX15s w. P30s-ring CC8 S11	12	22.8	1.90	P30s	35	58	28.5	390	1,000			
00842465	12V 3,0A SX15s w. P30s-ring CC8 S11	12	36	3.00	P30s	35	58	28.5	600	1,000			
00842071	12V 3.0A SX15s w. P30s-ring CC8 S11	12	36	3.00	P30s	35	60.3	28.5	600	1,000			
00842073	12V 5,0A SX15s w. P30s-ring CC8 S11	12	60	5.00	P30s	35	58	28.5	1,100	1,000			
00842287	12V 5,0A SX15s w. P30s-ring CC8 S11	12	60	5.00	P30s	35	58	28.6	900	1,000			



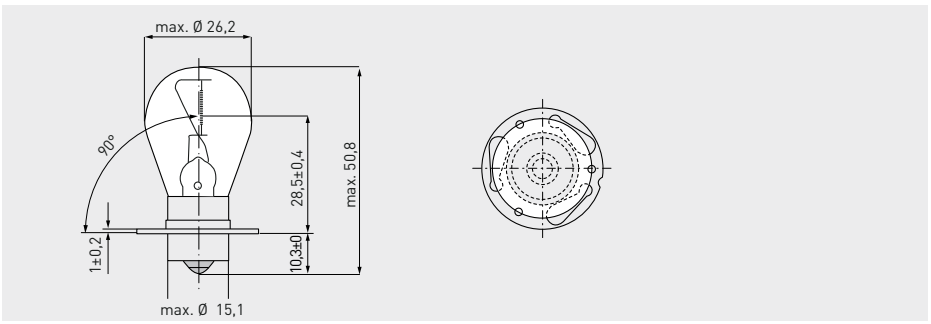
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842284	12V 0.5A SX15s/P30s-ring CC8 S8	12	6.6	0.55	P30s	26.2	50.8	28.5	100	500			
00842283	12V 1.0A SX15s/P30s-ring CC8 S8	12	12	1.00	P30s	26.2	50.8	28.5	200	500			
00842286	12V 2.0A SX15s/P30s-ring CC8 S8	12	24	2.00	P30s	26.2	50.8	28.5	360	500			
00842285	12V 3,0A SX15s/P30s-ring CC8 S8	12	36	3.00	P30s	26.2	50.8	28.5	600	500			

Standard lamps
For light buoys

For special features, specific benefits and areas of use see page 76



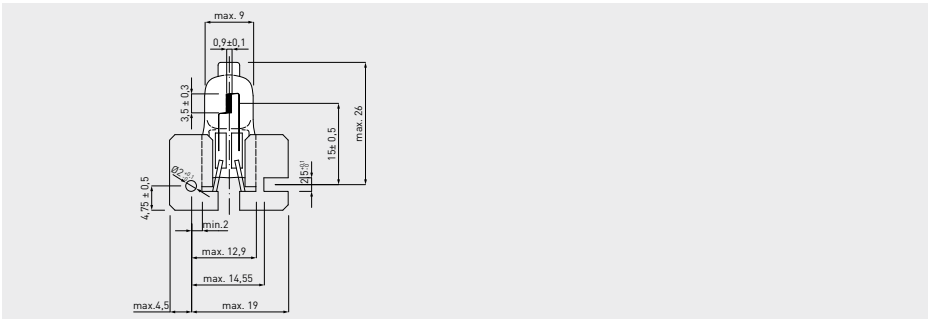
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842491	12V 1.9A SX15s w. threaded ring CC8 S11	12	23	1.90	Sx15s	35	60.33	28	390	1,000			



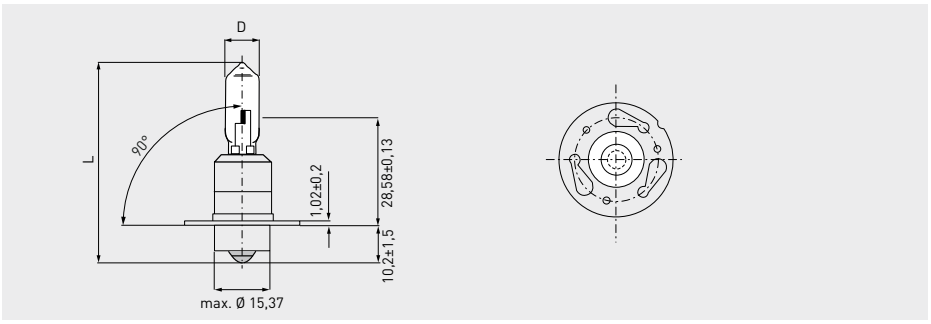
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842477	12V 2.03A SX15s w. P30s-ring C8 S8	12	24	2.03	P30s	26.2	50.8	28.5	350	1,000			

Standard lamps
For light buoys

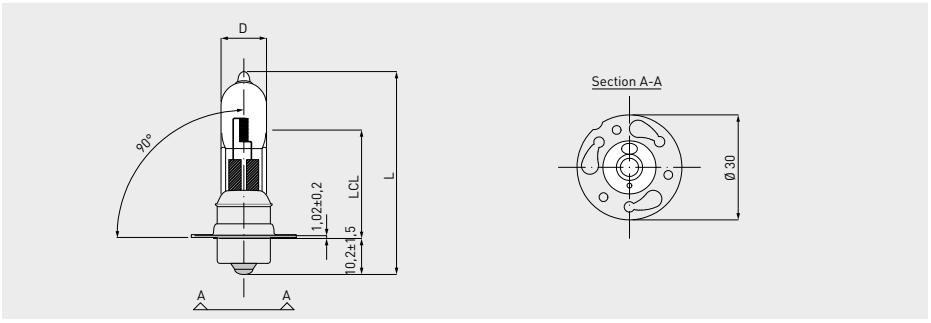
For special features, specific benefits and areas of use see page 76



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847122	12V 10W A21/14 Halogen	12	10		A21/14	9	31.25	15.0	150	2,000	1,200		
00847123	12V 20W A21/14 Halogen	12	20		A21/14	9	31.25	15.0	360	2,000	1,200		



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
91125-630 P	Halogen lamp 12V 5-6W	12	5-6		PR 30s	9	50	28.58	70	2,000			
8400121030	Halogen lamp 12V 10W PR 30s	12	10		PR 30s	9	50	28.58	150	2,000			
8400122030	Halogen lamp 12V 20W PR 30s	12	20		PR 30s	11	50	28.58	400	2,000			
8400123530	Halogen lamp 12V 35W	12	35		PR 30s	11	50	28.58	800	2,000			
8400125030	Halogen lamp 12V 50W	12	50		PR 30s	11	50	28.58	1,200	2,000			
8400127530	Halogen lamp 12V 75W	12	75		PR 30s	11	50	28.58	1,400	2,000			
8401210030	Halogen lamp 12V 100W PR30s	12	100		PR 30s	11	54	28.58	2,300	2,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8402415030	Halogen lamp 24V 150W PR30s	24	150		PR 30s	16	59	31	3,000	1,500			
8402410030	24V 100W PR 30s	24	100		Sx15s	13	51	28.5	2,100	2,000			

Standard lamps

For lighthouses, helicopter landing pads and oil platforms

Special features:

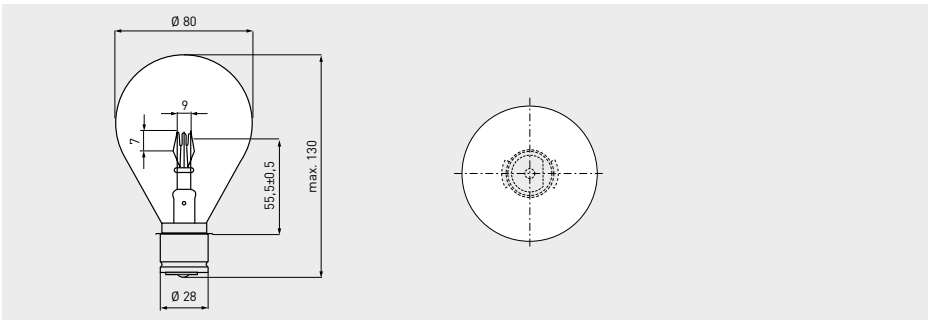
- precision of manufacture, minimum tolerances in the positioning of the filaments
- premium-quality inert gas filling
- also adaptable for special requirements, such as with heat protection

Specific benefits:

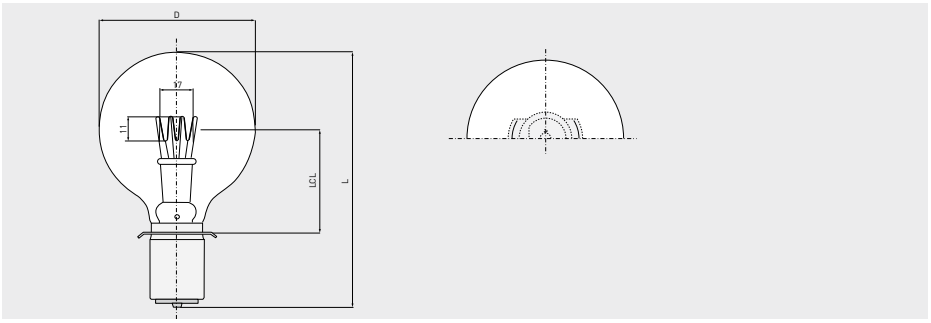
- high luminous flux
- precise positioning within the lamp
- high resistance to outside influences and corrosion
- lamps with heat protection are suitable for areas where there is a danger of explosion (no hotspot on the lamp)

Areas of use:

- helicopter landing pads
- oil platforms
- lighthouses



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842234	50V 250W P28s	50	250		P28s	80	130	55.5	4,260	800			
00842561	240V 250W P28s 80x130 clear 3000h	240	250		P28s	80	130	55.5	2,400	3,000			

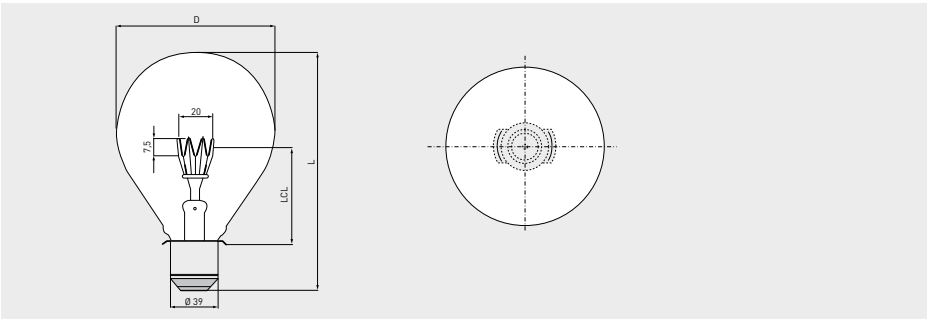


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842394	100V 250W P28s	100	250		P28s	80	130	55.5	3,625	800			
00842411	100V 1000W (842155 un-capped)	100	1,000		P40s Special cap	125	195	80					

Standard lamps

For lighthouses, helicopter landing pads and oil platforms

For special features, specific benefits and areas of use see page 82

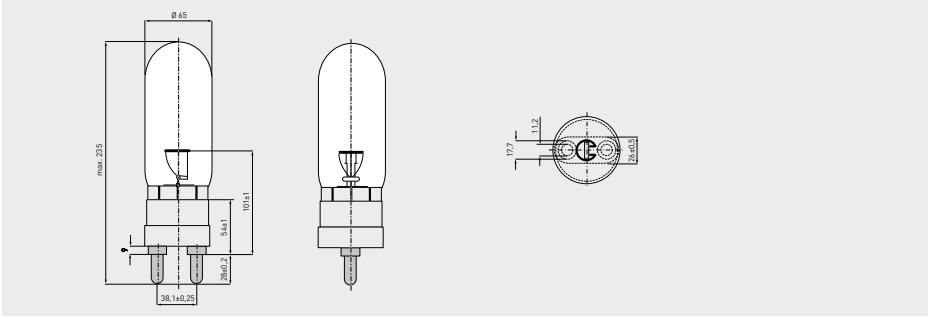


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842155	100V 1000W P40s	100	1,000		P40s	125	195	80	20,000	800			
00842256	100V 1500W P40s	100	1,500		P40s	130	195	80	29,000	800			
00842265	100V 500W P40s	100	500		P40s	130	195	80	8,000	800			
00842047	130V 1000W P40s	130	1,000		P40s	130	213	101	19,500	800			
00842055	230V 500W P40s	230	500		P40s	120	183	68	8,020	500			
00842056	230V 1000W P40s	230	1,000		P40s	125	213	101	18,150	500			
00842222	240V 500W P40s	240	500		P40s	130	195	80	7,500	800			

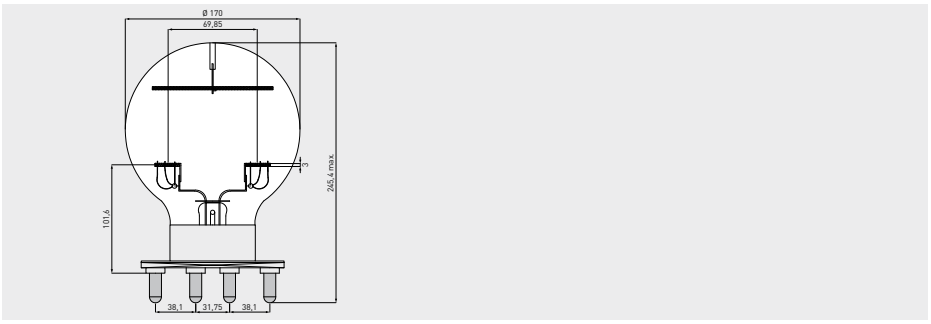
Standard lamps

For lighthouses, helicopter landing pads and oil platforms

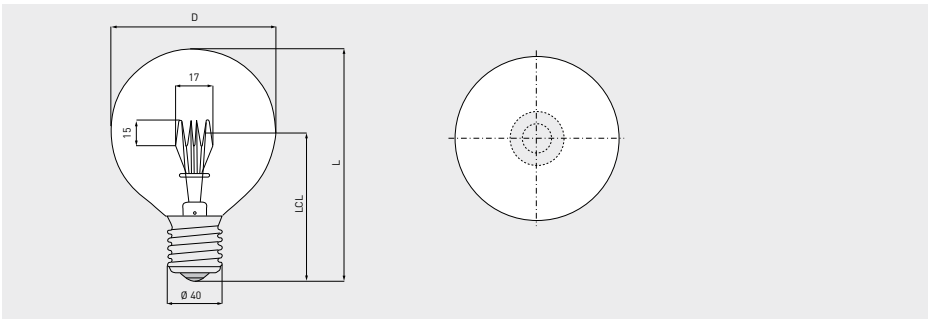
For special features, specific benefits and areas of use see page 82



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842584	110V 750W G38/55x60 LL	110	750		G38	65	235	101	11,000	2,000			
00842476	120V 375W G38/29x65	120	375		G38	65	235	101	5,500	1,000			
00842075	120V 750W G38/55x60	120	750		G38	65	235	101	11,000	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842350	120V 400/400W G52	120	400/400		G52	170	245.4	101.6	6,000	800			
00842076	120V 750/750W G52	120	750/750		G52	170	245.4	101.6	11,000	800			

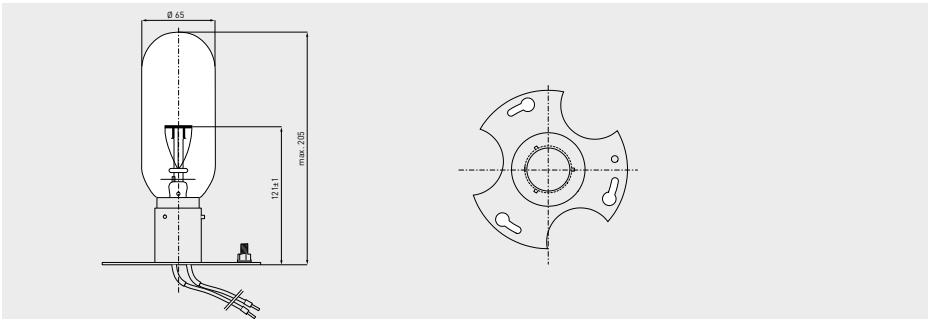


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842170	120V 500W E40	120	500		E40	120	175	108	9,300	1,000			
00842276	130V 1000W E40	130	1000		E40	130	213	140	19,500	800			

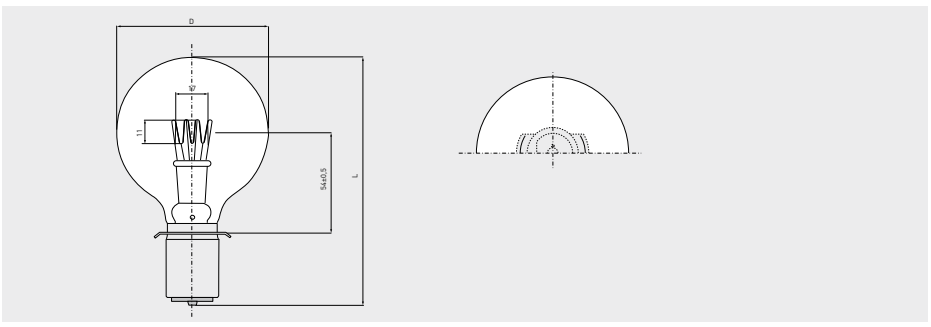
Standard lamps

For lighthouses, helicopter landing pads and oil platforms

For special features, specific benefits and areas of use see page 82



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842274	120V 750W SPEZ-SO.	120	750		special	65	205	121	14,500	1,000			
00842541	120V 400W SPEZ-SO. w. heat protection	120	400		special	65	205	121	6,000	800			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842044	130V 100W P28s	130	100		P28s	80	127	54	1,200	800			
00842052	230V 100W P28s	230	100		P28s	80	123	54	1,035	500			
00842490	230V 250W P28s	230	250		P28s	80	132	54	3,440	500			
00842054	230V 250W P28s	230	250		P28s	80	132	54	3,440	500			

Standard lamps

For position lights for ships

Standard lamps

For position lights for ships

Special features:

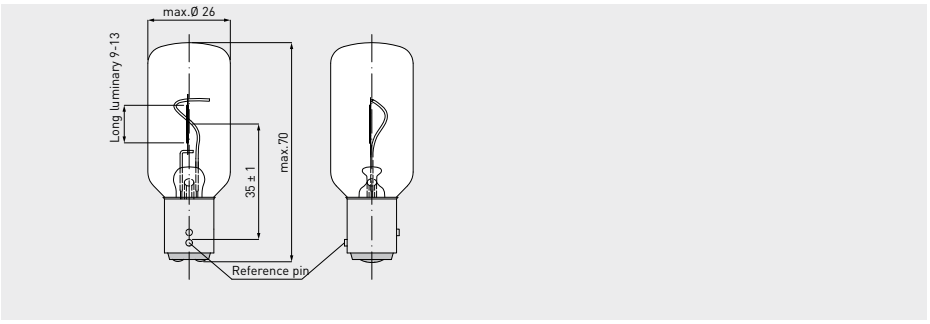
- fulfils DIN 14744 (BSH approval under preparation)
- approval from the Miniterie Verkeer en Waterstaat, Directie Noordzee, Netherlands
  - N.00.008 24V 40W ; 110V 60W ; 220V-65W
  - N.03.011 12V-25W; 24V-10W; 24V- 25W
- precision of manufacture, minimum tolerances in the positioning of the filaments
- corrosion-proof, nickel-plated cap

Specific benefits:

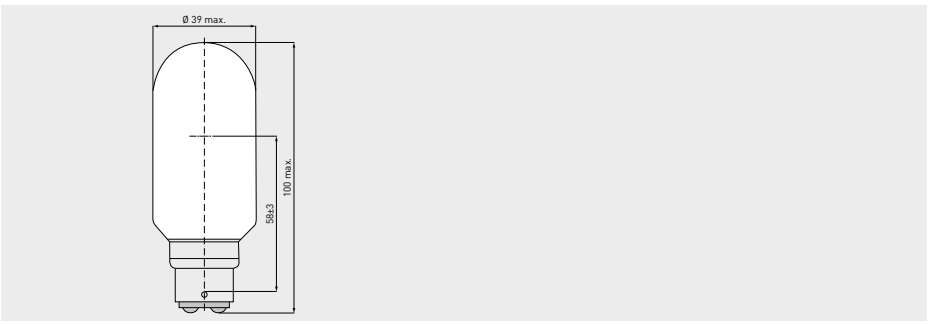
- high resistance to outside influences, shock and vibration by means of SRT (shock-resistant tungsten) filaments
- all-round (360 °) even luminosity
- long-life versions available (approvals requested)

Areas of use:

- ship position lights



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842416	12V 10W BAY15d	12	10		BAY15d	26	70	35	175	1,000			
00842417	12V 25W BAY15d	12	25		BAY15d	26	70	35	450	1,000			
00842418	24V 10W BAY15d	24	10		BAY15d	26	70	35	175	1,000			
00842419	24V 25W BAY15d	24	25		BAY15d	26	70	35	450	1,000			
00842538	24V 40W BAY15d	24	40		BAY15d	25	70	35	650	1,000			
00842540	28V 10W BAY15d	28	10		BAY15d	26	70	35	135	1,000			
00842441	28V 25W BAY15d	28	25		BAY15d	25	70	35	300	1,500			

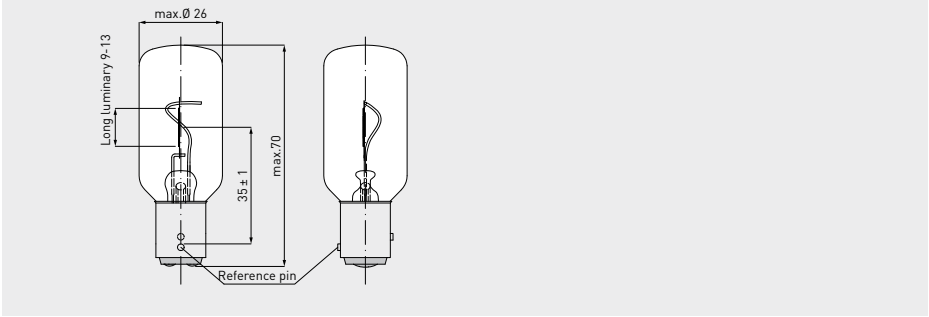


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842589	24V 10W BA15d T38x100 clear	24	10		Ba15d	39	100	58	175	1,000			
00842516	24V 25W BA15d T38x100 clear	24	25		Ba15d	39	100	58	450	1,000			

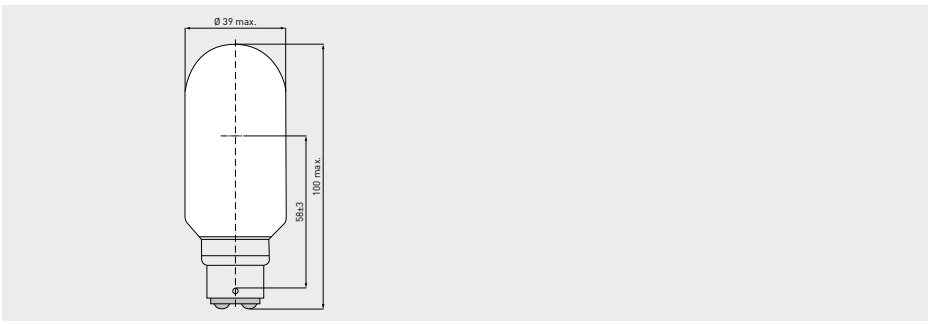
Standard lamps

For position lights for ships

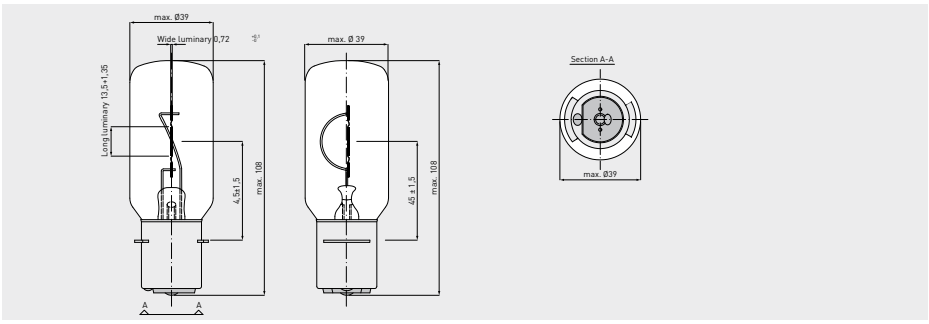
For special features, specific benefits and areas of use see page 87



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842545	24V 24W Ba15d T25x70 clear 30cd min.	24	24		BAY15d	26	70	35	390	1,000			



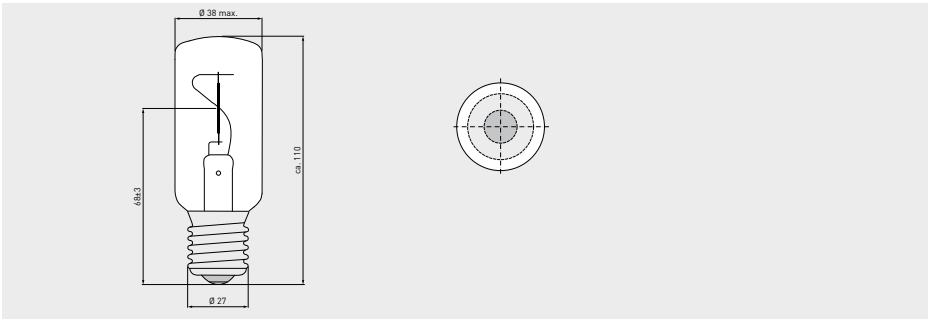
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
S0842471	24V 40W B22d	24	40		B22d	39	100	58	650	1,000			



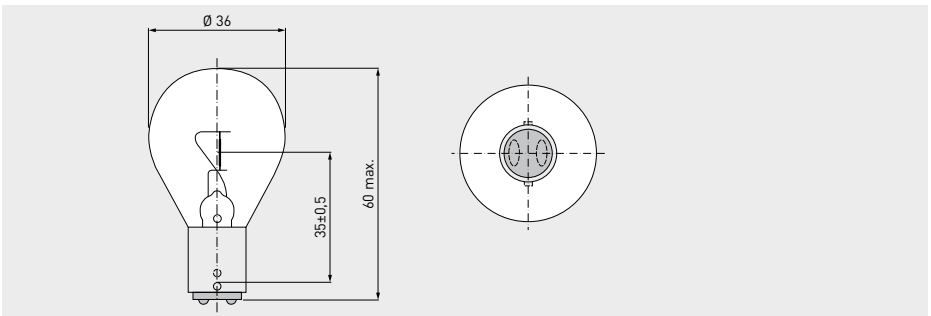
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00843344	24V 40W P28s T.38x110	24	40		P28s	39	108	45	650	1,000			
00842562	24V 65W P28s T.38x108	24	65		P28s	39	108	45	950	1,000			

Standard lamps
For position lights for ships

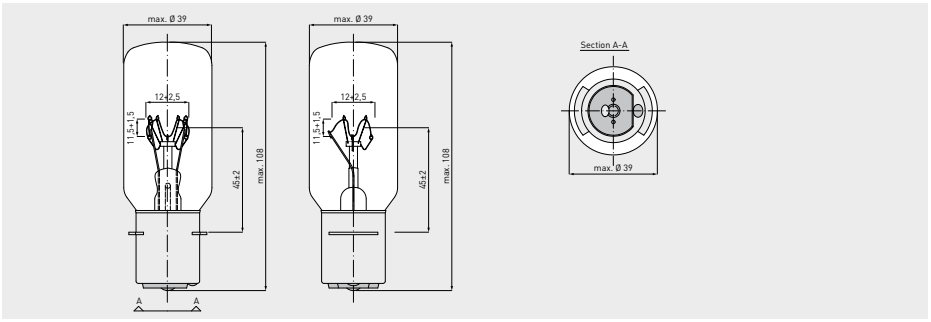
For special features, specific benefits and areas of use see page 87



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00843356	24V 40W E27	24	40		E27	38	110	68	650	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842020	32V 25W BAY15d	32	25	0.78	BAY15d	36	60	35	350	1,000			

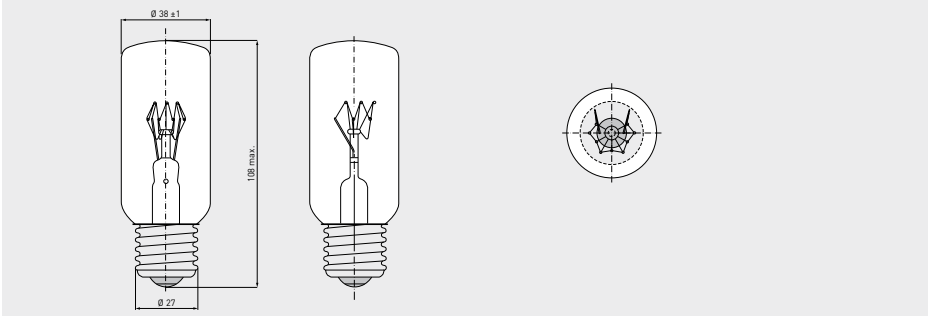


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842594	110V 40W P28s	110	40		P28s	39	108	45	350	1,000			
00842450	110V 60W P28s	110	60		P28s	39	108	45	550	1,000			
00842559	115V 60W P28s	115	60		P28s	39	108	45	600	1,500			
00842449	220V 65W P28S	230	65		P28s	39	108	45	600	1,000			
00842949	220V 75W P28s 8000h	220	75		P28s	39	108	45	525	8,000	3,000		
00842470	220V 85W P28s	220	85		P28s	39	108	45	700	1,000			

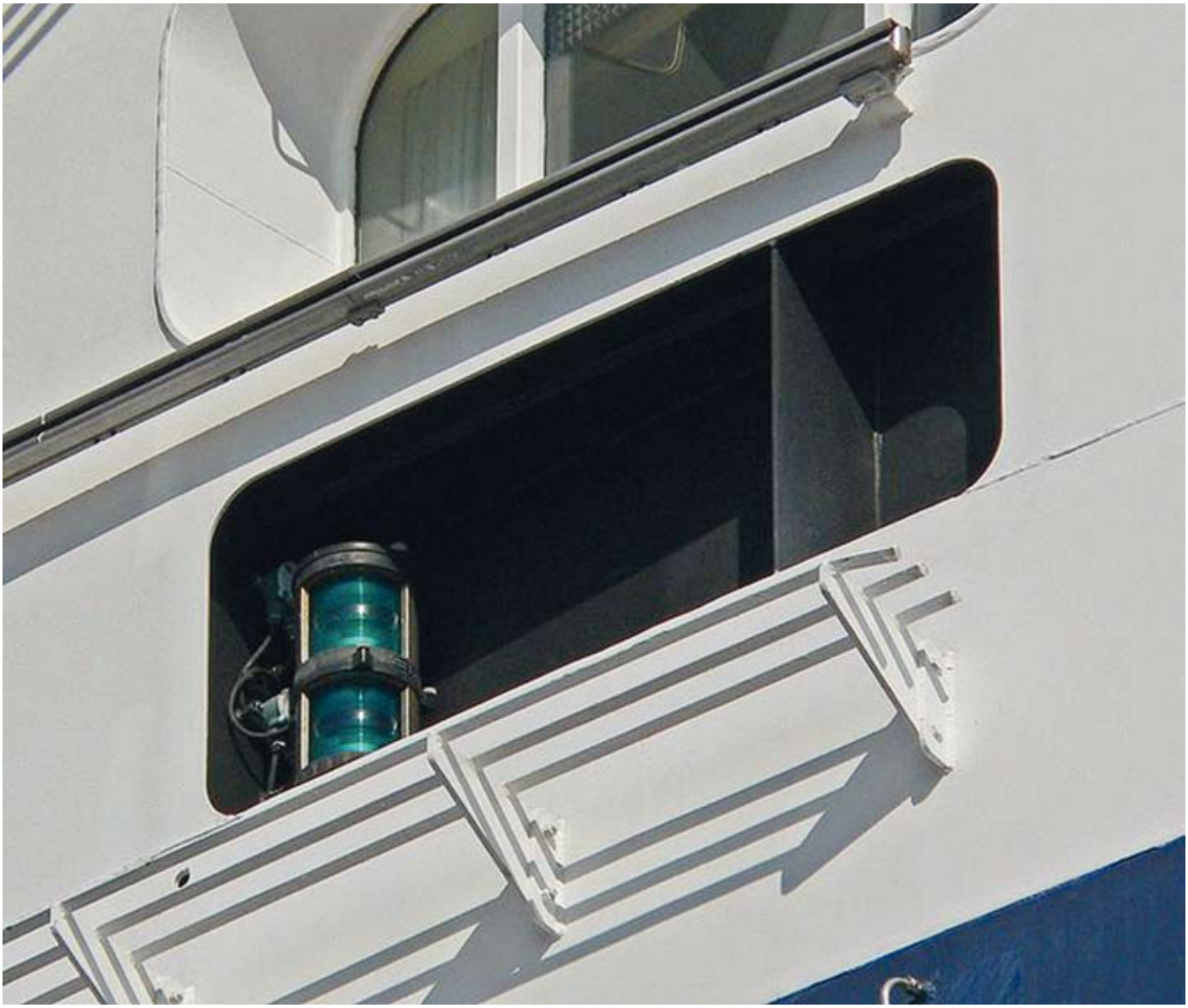
Position lamps for ships

For position lights for ships

For special features, specific benefits and areas of use see page 87



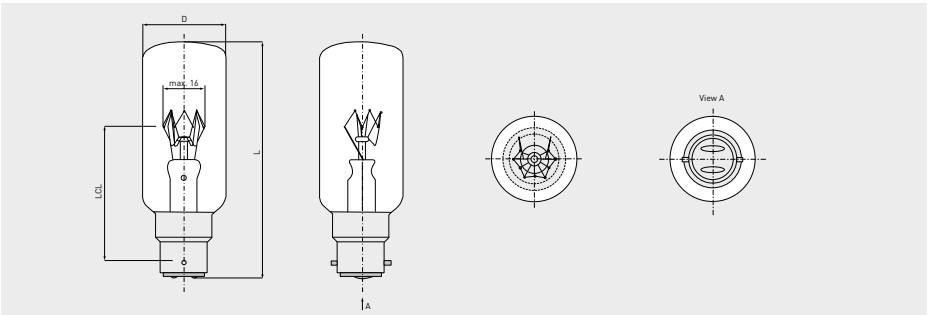
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842458	110V 60W E27	110	60		E27	39	108	75	550	1,000			
00842955	220V 65W E27 8000h	220	65		E27	39	108	72	525	8,000	3,000		
00842455	220V 65W E27	220	65		E27	39	108	72	600	1,000			
00842481	220V 85W E27	220	85		E27	39	108	75	790	1,000			



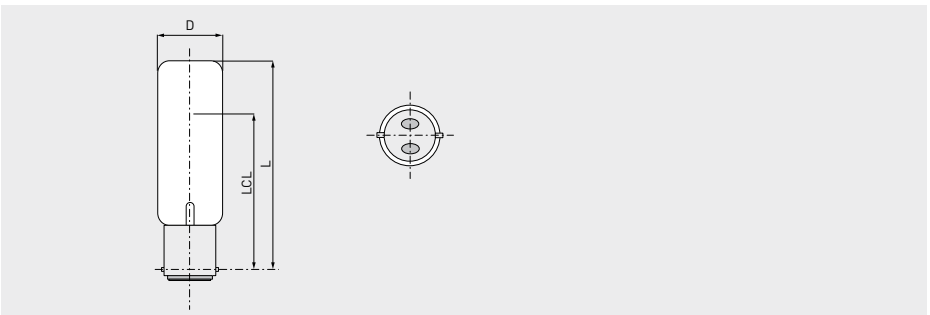
Position lamps for ships

For position lights for ships

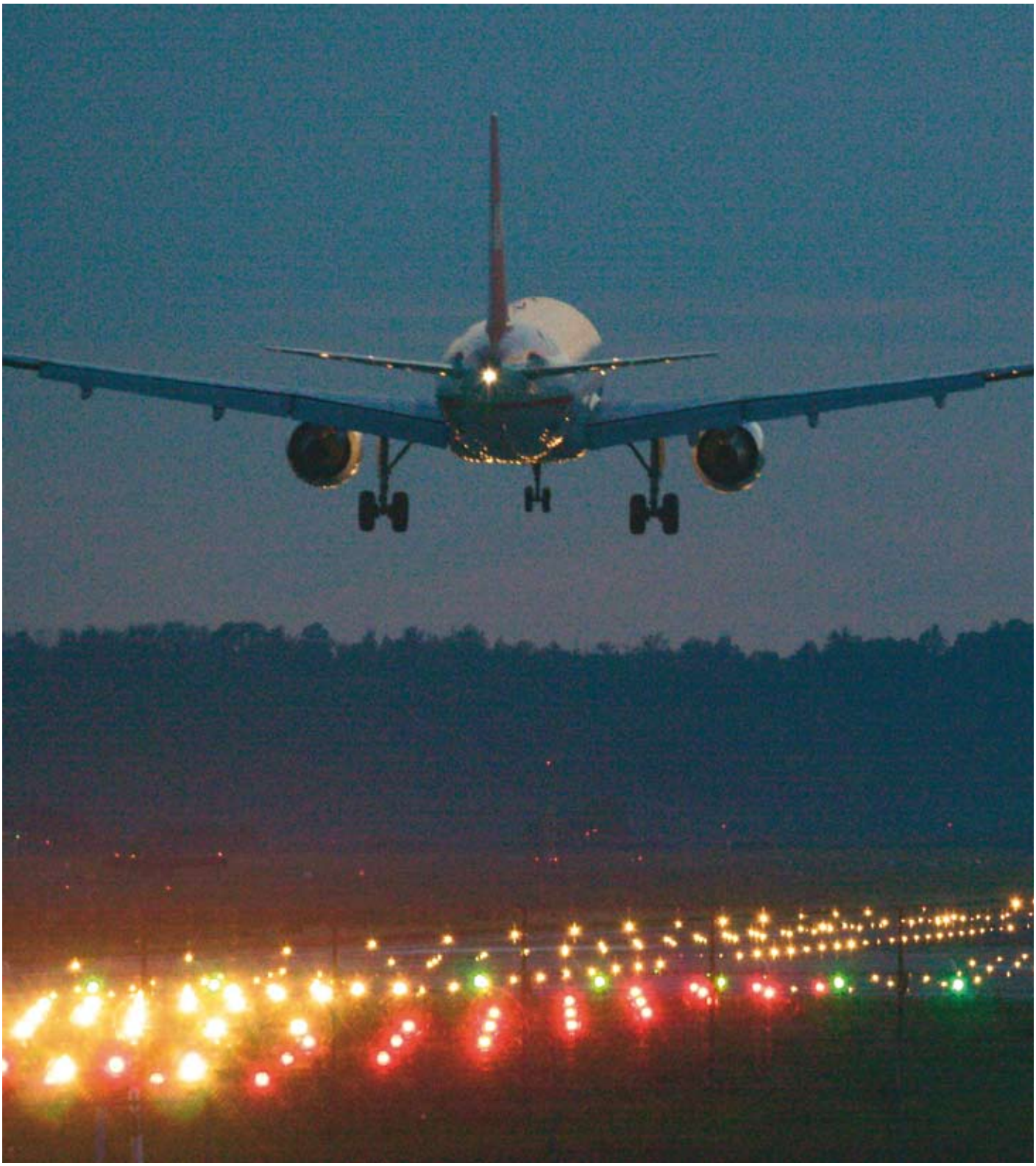
For special features, specific benefits and areas of use see page 87



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842472	110V 60W B22d	110	60		B22d	39	108	60	550	1,000			
00842473	110V 80W B22d	110	80		B22d	39	108	60	790	1,000			
00842456	220V 65W B22d	220	65		B22d	39	108	60	600	1,000			
00842956	220V 75W B22d 15000h	220	75		B22d	38	108	64	525	8,000	3,000		
00842457	220V 85W B22d	220	85		B22d	39	108	60	790	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842893	115V 40W B22d	115	40		B22d	29	100	70	500	1,000			
00842892	115V 60W B22d	115	60		B22d	29	100	70	760	1,000			
00842575	220V 40W B22d	220	40		B22d	29	85	65	345	1,000			
00842571	220V 60W B22d	220	60		B22d	29	100	70	760	1,000			



Light on the ground and in the air

Aviation has taken many of its terms from seafaring. And quite a few of the techniques were also taken from it at the beginning. For instance, when aviation was in its infancy the beaconing of airstrips was actually done using fires, and later oil lamp.

In modern aviation, aviation obstacles (by obstruction lights), approach paths and runways and taxi ways are beaconed.

On runways, beacon lights are positioned on the edges and, from a certain minimum width, in the middle for orientation purposes. The edge and central beaconing is, in the take-off or landing direction, first white, then alternating red and white, and finally red only. At the end of the runway, the illumination is red. The landing threshold is green. On precision runways, flashlights are used on both sides of the threshold (2 flashes per second) in white.

Additionally, light signals are used for approach beaconing (ALS, Approach Lighting System), for signalling height, direction and drift when approaching land and as a VASI (Visual Approach Slope Indicator), which helps to maintain the glide path when approaching a runway. VASI is not compulsory at airports.

Like ships, aeroplanes also have position lights. They indicate the presence of neighbouring aeroplanes and their flight paths to other pilots. As with sea traffic, the port side is indicated with a red light and the starboard with a green light on aeroplanes. The position lights are situated on the outside edges of the wings and therefore simultaneously mark the outside edges of the aeroplane. At the rear there is a white light pointing backwards. Sometimes, there are additional position lights affixed directly on the left and right sides of the fuselage. The intensity of the position and stroboscope lights can also penetrate light clouds and fog.

In addition to the position lights, an aeroplane also has an anti-collision light, which shows that the engine are running or it is preparing for take-off, and other lighting installations such as the powerful runway and taxiway lights and lights on the fuselage and wings for illuminating sensitive components.

The DR FISCHER Group helps guarantee safety on the ground and in the air with reliable lamps. We supply lamps for aeroplanes and airports all over the world.

Standard lamps

For illuminating approach paths, runways and landing strips, taxi ways and aviation obstacles

Special features:

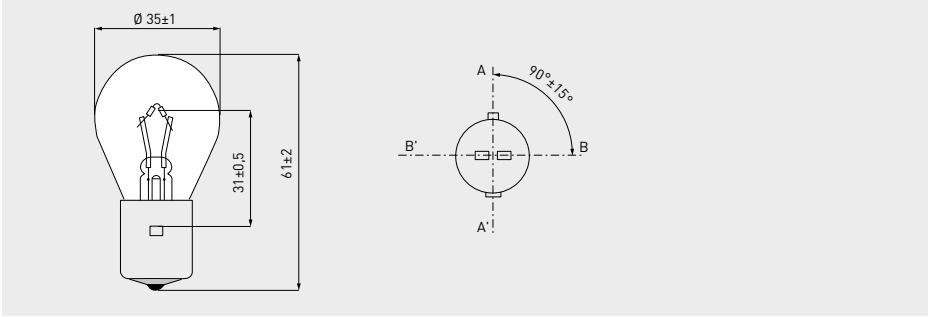
- precision of manufacture, minimum tolerances in the positioning of the filaments
- premium-quality inert gas filling
- fulfil the requirements of ICAO and any national regulations
- corrosion-proof, nickel-plated cap

Specific benefits:

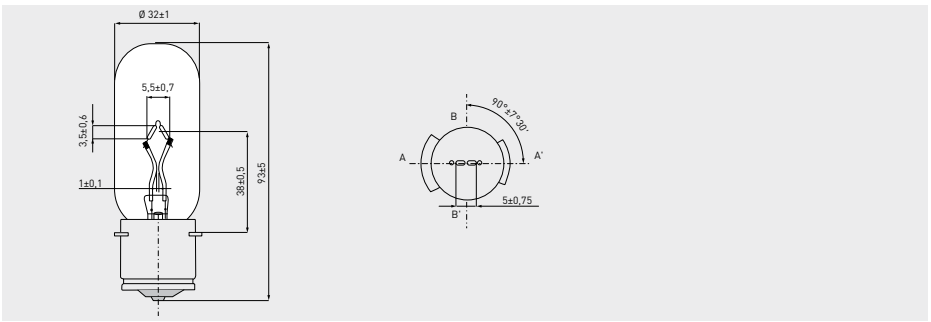
- high resistance to outside influences
- suitable for DC circuits

Areas of use:

- beaconing approach paths
- beaconing runways and landing strips
- beaconing von taxi ways
- beaconing aviation obstacles



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842478	5.83A 35W BA20s	6	35	5.83	Ba20s/23	36	63	31	min 468	1,000			
00842556	36W 6.0A BA20s	6	36	6	Ba20s/23	36	63	31	min 468	1,000			

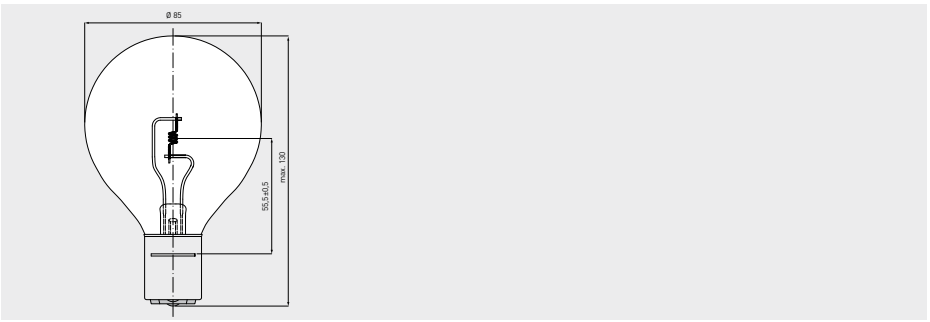


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
70842307	6.6A 30W P28s		30	6.6	P28s	33	98	38	450	800			
70842310	6.6A 45W P28s		45	6.6	P28s	33	98	38	730	1,000			
70842324	6.6A 100W P28s		100	6.6	P28s	33	98	38	1,850	1,000			

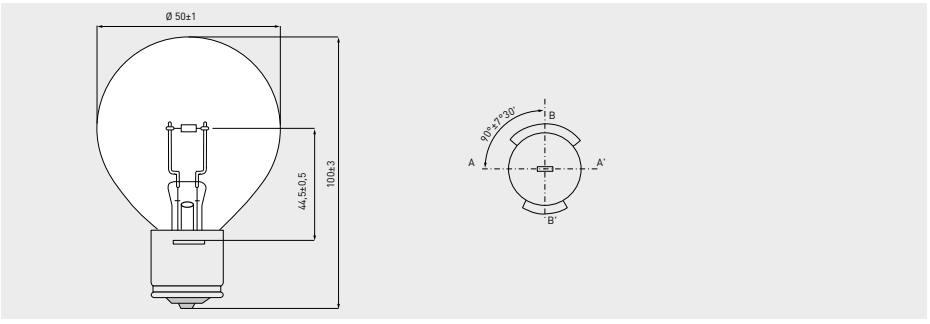
Standard lamps

For illuminating approach paths, runways and landing strips, taxi ways and aviation obstacles

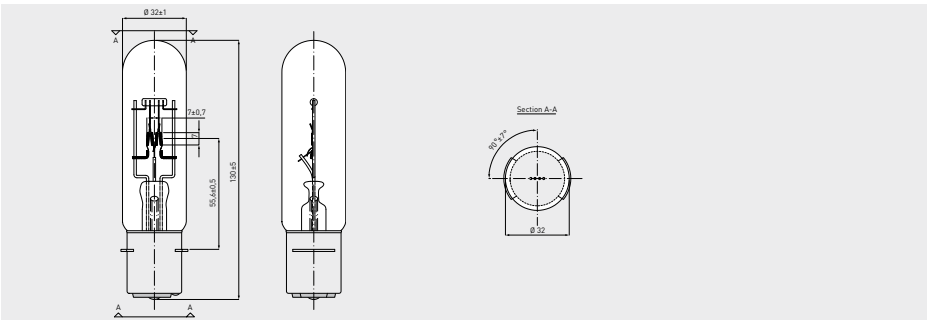
For special features, specific benefits and areas of use see page 94



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842560	6.6A 200W P28s	30.3	200	6.6	P28s	85	130	55.5	3,700	800			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
70842329	6.6A 200W P28s	30.3	200	6.6	P28s	51	103	44.5	4,600	200			

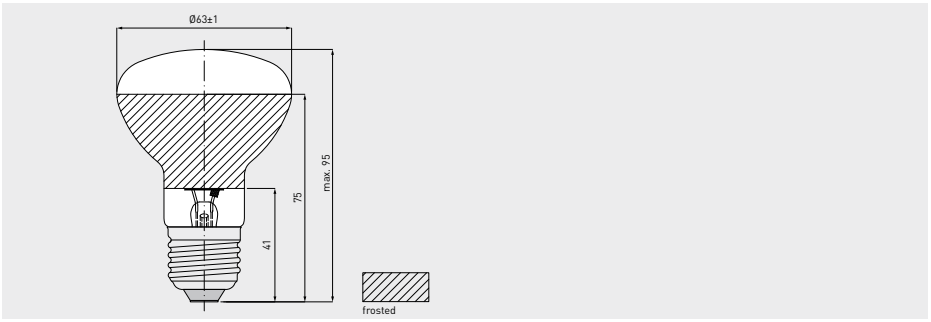


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
70842312	6.6A 210W P28s/33	31.81	210	6.6	P28s	33	135	55.6	4,500	300			

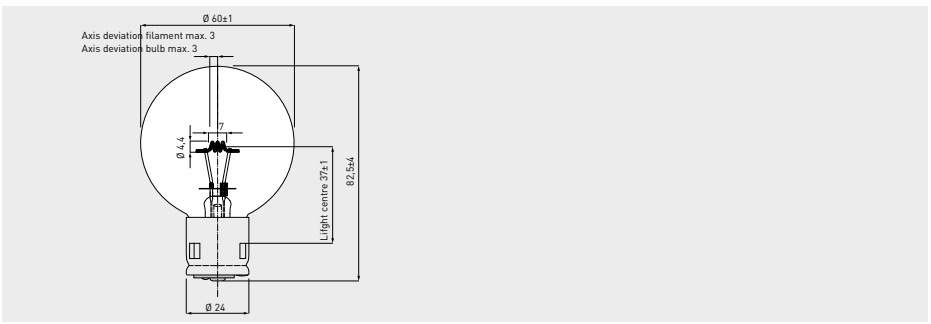
Standard lamps

For illuminating approach paths, runways and landing strips, taxi ways and aviation obstacles

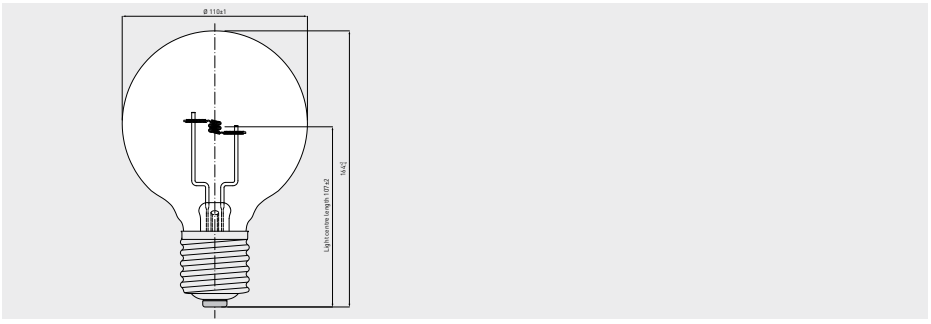
For special features, specific benefits and areas of use see page 94



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842587	12V 50W E27	12	50		E27/27	64	95		725	1,000			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842013	24V 200W B24s	24	200		B24s-3	61	86.5	37	4,000	100			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842448	24V 500W E40	24	500		E40/45	111	166	107	10,000	min. 50			

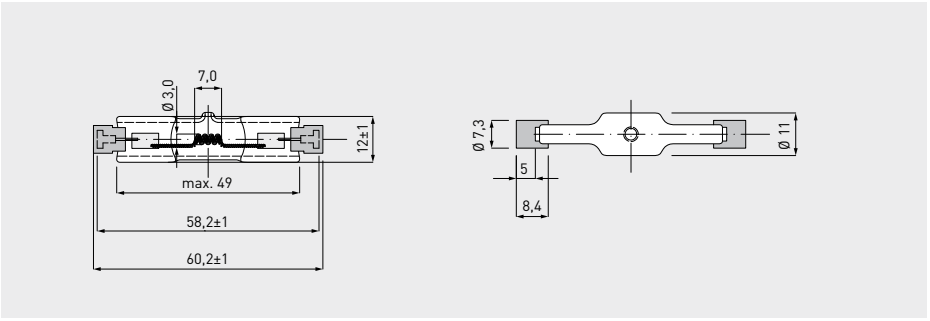
Standard lamps

For illuminating approach paths, runways and landing strips, taxi ways and aviation obstacles

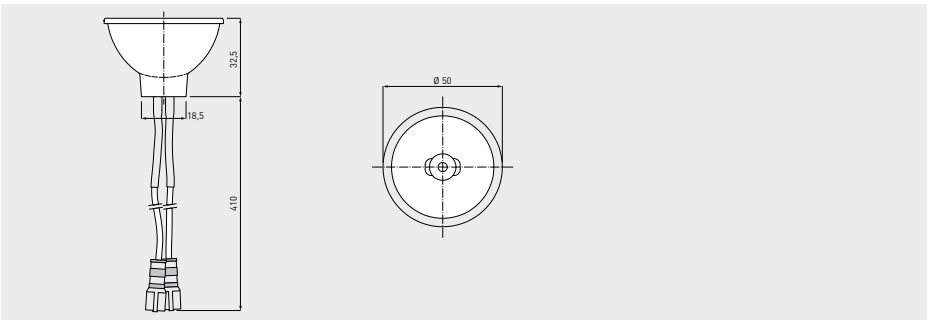
Special features:
- precision of manufacture, minimum tolerances in the positioning of the filaments
- premium-quality inert gas filling
- fulfil the requirements of ICAO and any national regulations

Specific benefits:
- high, constant luminous flux
- high resistance to outside influences, shock and vibration
- long life

Areas of use:
- beaconing approach paths
- beaconing runways and landing strips
- beaconing of taxi ways
- beaconing aviation obstacles



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847127	6.6A 100W R7s/20		100	6.6	R7s	13	60.2		2,000	1,000		any	
00847162	6.6A 200W R7s/20 length 64.2mm		200	6.6	R7s	13	64.2		4,400	1,000		any	
00847128	6.6A 200W R7s/20 length 60.2mm		200	6.6	R7s	13	60.2		4,400	1,000		any	

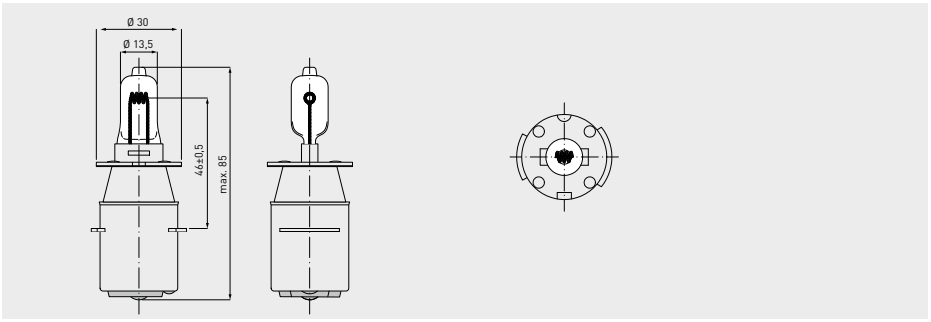


Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847147	6.6A 150W MR16 (50mm reflector)		150	6.6	cable with 2 pieces of blade receptacle 6.3 x 0.8	50	32.5		3,000	1,000			

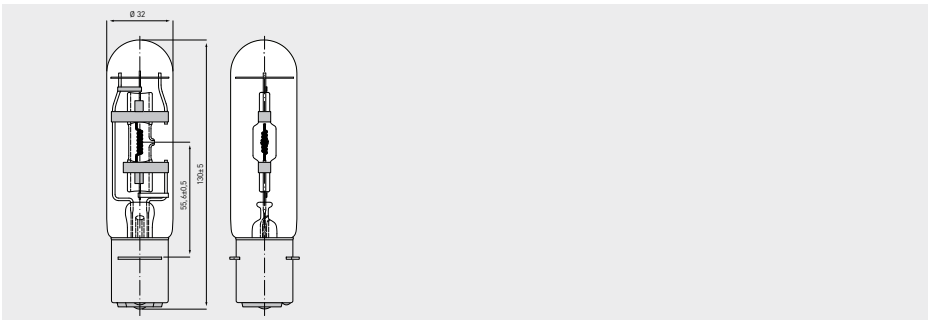
Standard lamps

For illuminating approach paths, runways and landing strips, taxi ways and aviation obstacles

For special features, specific benefits and areas of use see page 97



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847168	6.6A 200W P28s	30.3	200	6.6	P28s	13.5	85	46	4,800	1,000			



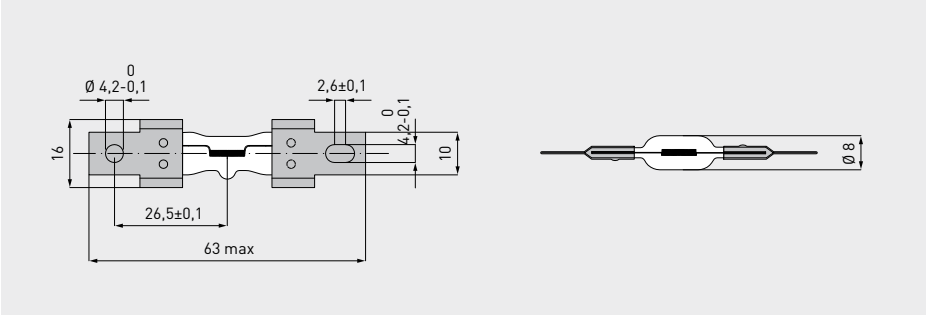
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847166	8.33A 200W P28s 32x132 clear	24	200	8.33	P28s	32	135	55.6	3,600	1,000			

Position lamps
Aeroplane headlights

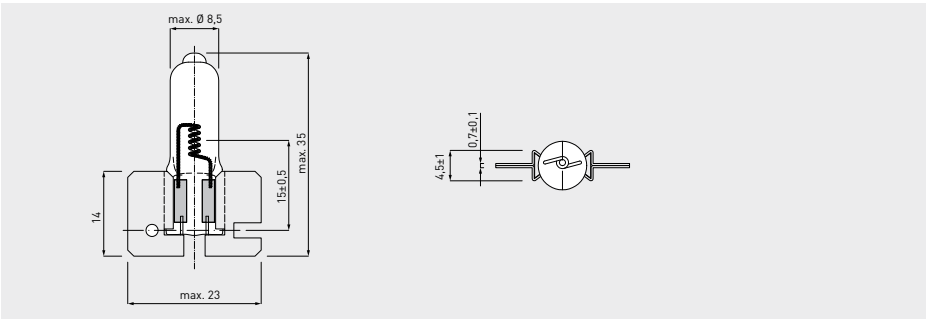
Special features:
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:
- high, constant luminous flux
- high resistance to shock and vibration
- designed for 28 V onboard voltage

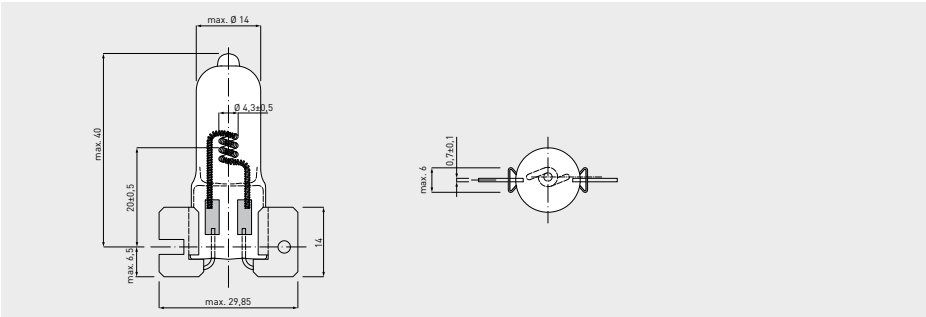
Areas of use:
- aeroplane headlights



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847609	28V 85W N8x63 clear	28	85	3.04	special	8.0	63		2,000	250			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847605	28V 85W A23/14 T8.5x35 CL	28	85	3.04	A23/14	8.5	35	15	1,870	300			
00847604	28V 120W A22/14 T8.5x35 CL	28	120	4.29	A22/14	8.5	35	15	2,300	800			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847603	28V 250W A29/14 Halogen	28	250	8.93	A29/14	14	46.5	20	6,800	270			

Contents

The strictest conditions apply to medical lamps and lights

There are frequently reports of operations that are supposed to have been carried out after a power cut using the lights from mobile phone displays. And it is certainly possible in some individual cases that emergency medical treatment has to take place in very difficult light conditions.

But the standard requirements made on lighting during operations, in dentistry or medical analysis are extremely high.
Lamps used in these areas must have good colour reproduction, high light yield and the lowest possible heat emission. And they must be extremely safe and reliable.

In Kegler Lichttechnik GmbH, the DR FISCHER Group has a centre of competence that fulfils the highest quality standards and can also manually manufacture very small batches that are made precisely to fulfil the specific requirements.

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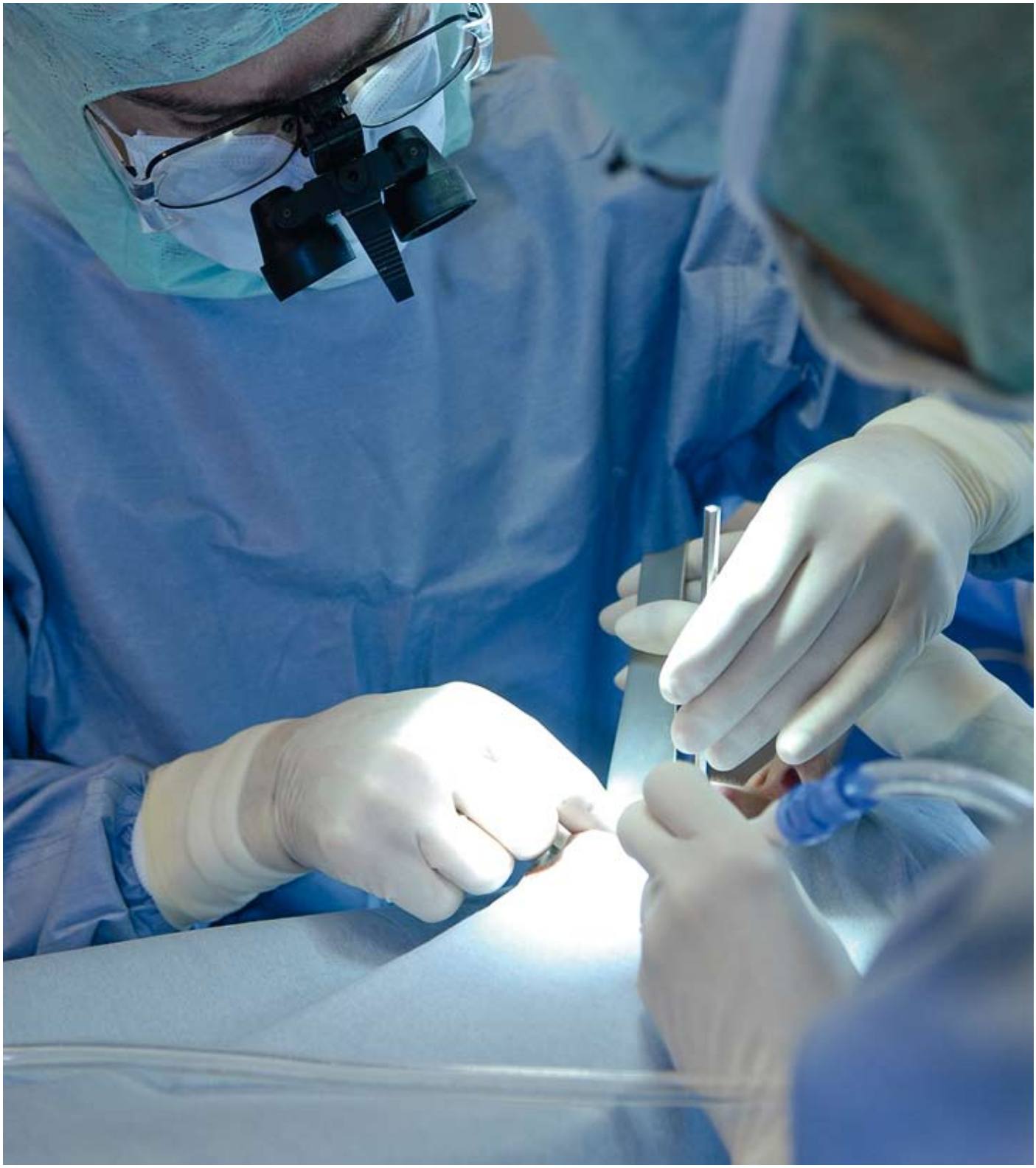


Focussing on dental lighting

In the field of medicine in particular, optimum conditions for enabling the rapid and safe perception of a given situation, thereby enabling safe and professional work, must be guaranteed.

Dental lights with special lamps are required while seeking evidence or making a diagnosis and treatment at dental practices. During the intraoral examination, the examination of the patient's teeth, gums and other mucous membranes in the oral cavity, sufficient glare-free brightness is an important prerequisite. Another quality criterion for light is also colour reproduction.

But orthodontics, implantology, oral, jaw and maxillofacial surgery require perfect light. For this reason, lamps made for these purposes must fulfil the highest standards of precision. The surgeon can only make a correct diagnosis and a good therapeutic intervention if the treatment area is illuminated perfectly.

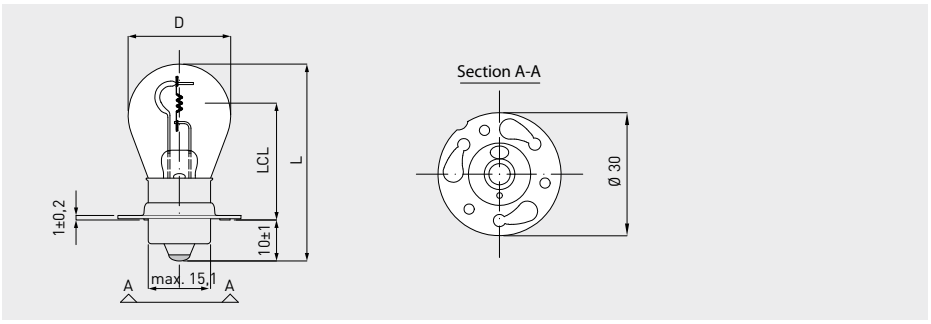
Reliable lamps are also the basis of safe and skilfully-crated work in dental laboratories. Bright, glare-free light is a necessity when models are being created. Colour-neutral light is important for manufacturing dental prostheses that match the colour of the existing teeth.

Standard lamps
Dental technology

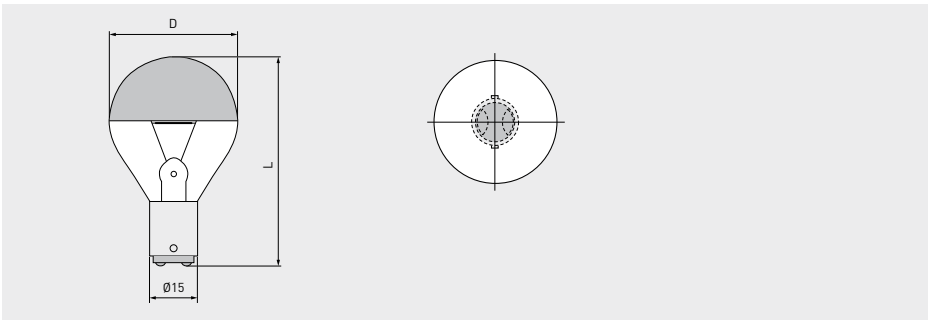
Special features:
- transparent, with mirrored or black dome
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- premium-quality inert gas filling
- different special caps available
- IR coating possible
- as a custom specification: lamps with a bimetallic switch in the cap

Specific benefits:
- very precise positioning in the light
- optimum power concentration
- with IR coating: the same luminosity with reduced heat emission
- high luminous flux
- high operating safety

Areas of use:
- dental lighting



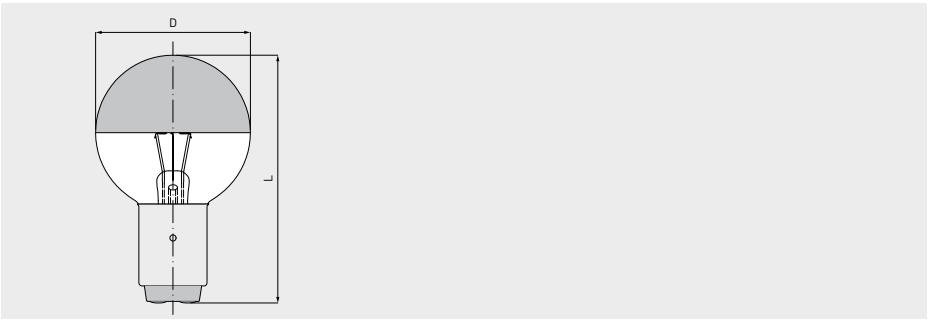
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00842508	12V 25W P30s	12	25		P30s	26.2	50.8	28.9	360	500			



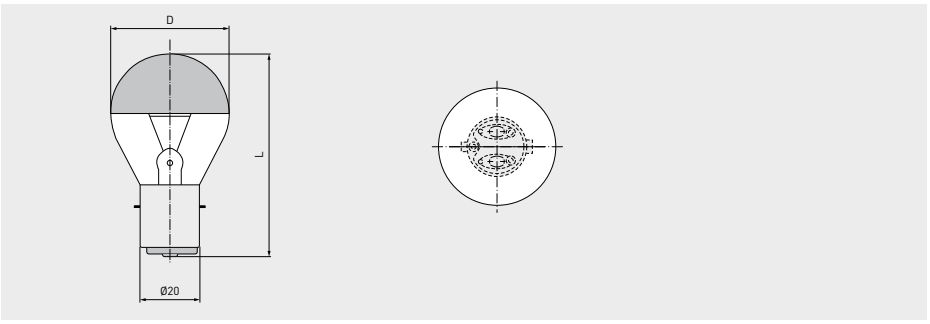
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936004	12V 25W BA15d transversal	12	25		BA15d	40	66		300	600			
00936111	12V 35W BA15d axial	12	35	2.92	BA15d	40	63		390	500			
00936011	12V 40W BA15d transversal	12	40		BA15d	40	63		500	600			
00936065	24V 25W BA15d transversal	24	25		BA15d	50	74		300	300			
00936001	24V 25W BA15d with Pre cap axial	24	25		BA15d	40	64		350	500			
00936012	24V 25W BA15d transversal	24	25		BA15d	40	65		300	300			
00936035	24V 30W BA15d transversal	24	30		BA15d	40	62		450	200			
00936014	24V 40W BA15d transversal	24	40		BA15d	40	65		500	600			
00936015	24V 40W BA15d axial	24	40		BA15d	40	65		500	600			
00936064	24V 40W BA15d transversal	24	40		BA15d	50	74		500	600			

Standard lamps
Dental technology

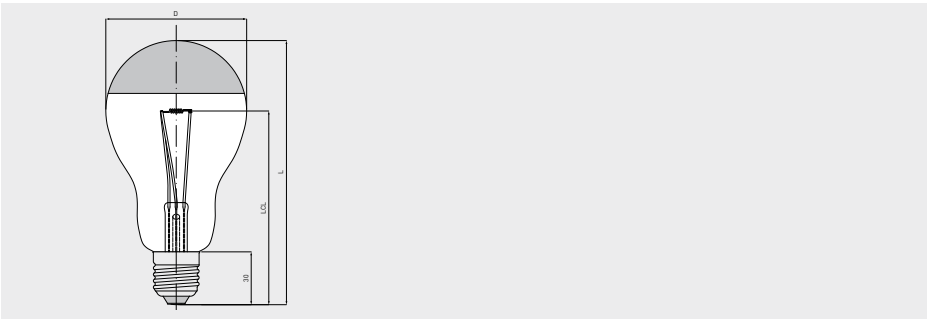
For special features, specific benefits and areas of use see page 104



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00936041	24V 40W BX22d transversal	24	40		BX22d	50	86		550	600			
00936009	24V 50W BX22d transversal	24	50		BX22d	50	82		670	300			
00936046	50V 50W BX22d transversal	50	50		BX22d	50	82		415	1,000			



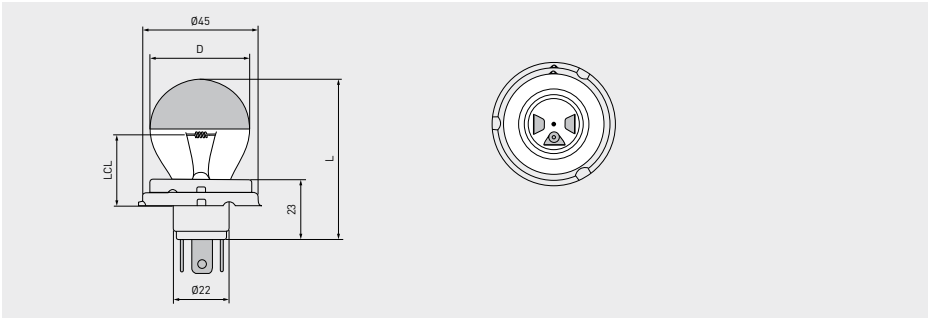
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00936023	24V 25W BA20d transversal	24	25		BA20d	40	64		350	500			
00936042	24V 25W BA20d transversal	24	25		BA20d	40	max. 68		330	600			
00936016	24V 60W BA20d axial	24	60	2.5	BA20d	40	max. 68		860	400			



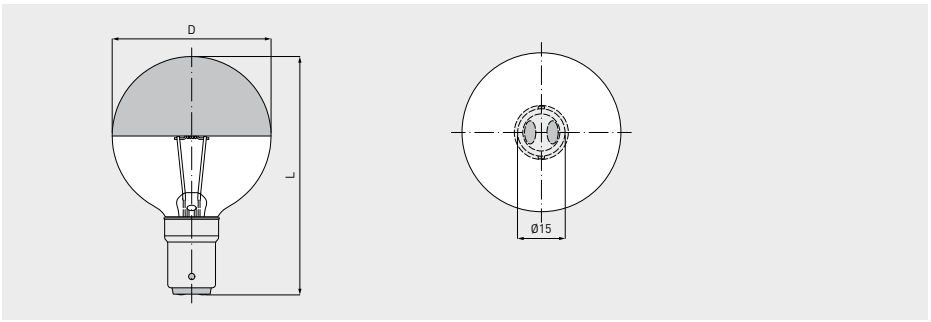
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00936026	24V 75/75W E27	24	75/75		E27	80	150	110	1,700	100			
00936025	24V 100/100W E27	24	100/100		E27	90	170	130	3,500	100			
00936033	24V 50/50W B22d/25x26	24	50/50		B22d	70	117	78	1,400	300			

Standard lamps
Dental technology

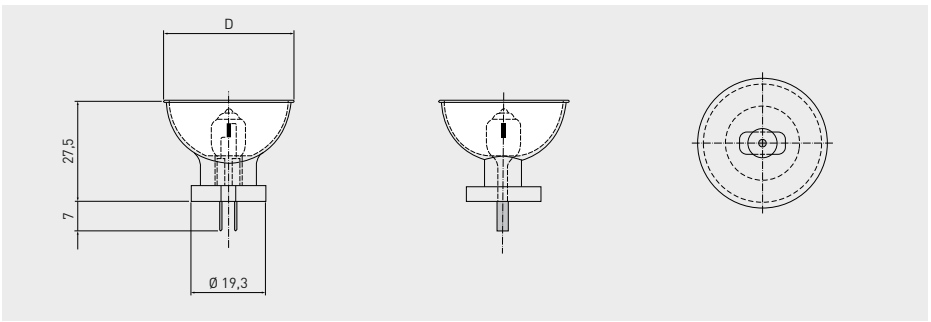
For special features, specific benefits and areas of use see page 104



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936054	24V 1.4A P45t transversal	24		1.4		40	76	35	430	600			
00936055	24V 1.4A P45t transversal	24		1.4		40	76	28	430	600			
00936063	24V 1.6A P45t transversal	24		1.6		40	76	28	500	600			



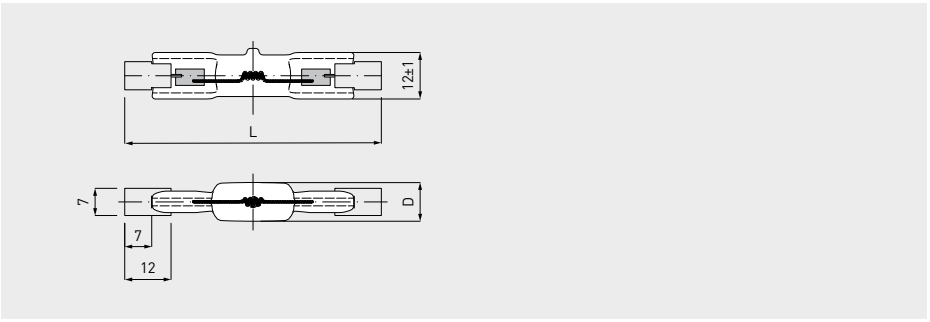
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936062	24V 40W BA15d/24x17 50x76 kv	24	40		BA15d	50	76		550	500			



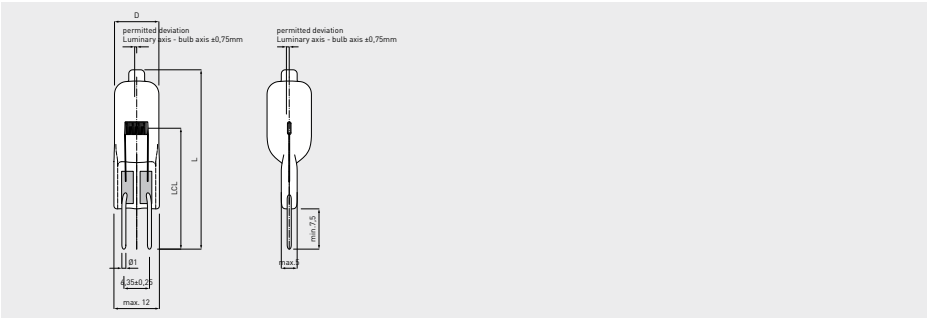
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
8600127500	reflector lamp 12V 75W with heat shield	12	75		Special				2,300	300			

Standard lamps
Dental technology

For special features, specific benefits and areas of use see page 104



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00847154	22.8V 75W R7s 13.5x64 clear H018366	22.8	75	3.3	R7s	13.5	64		1,600	1,000			

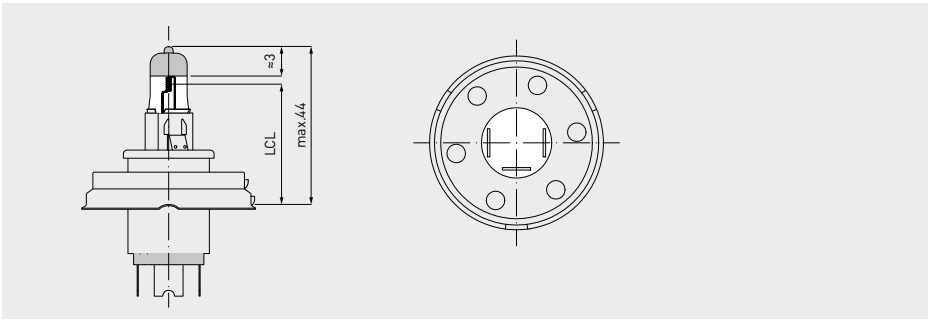


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00847519	22.8V 150W G6.35 10.7x47 clear transversal	22.8	150	6.6	G6.35	11	47	30.5	4,300	500		S90	
00847518	22.8V 250W G6.35 13x51 clear transversal	22.8	250	11	G6.35	13	53	33	8,000	300		S90	
00847528	22.8V 250W G6.35 13x51 clear transversal	22.8	250	11	G6.35	13	51	33	6,000	1,000		S90	
00847525	24V 150W G6.35 12x47 clear transversal	24	150	6.25	G6.35	11	47	30.5	4,500	300		S90	
00847529	24V 150W G6.35 12x47 clear transversal	24	150	6.25	G6.35	11	47	30.5	3,450	1,000		S90	
00847523	24V 250W GY6.35 16x56 clear transvers.	24	250	10.4	G6.35	16	56	37.5	6,200	1,000		S90	
00847520	22.8V 55W G6.35 10.7X 41 clear transver.	22.8	55	2.4	G6.35	11	41	30.5	1,100	1,000		S90	

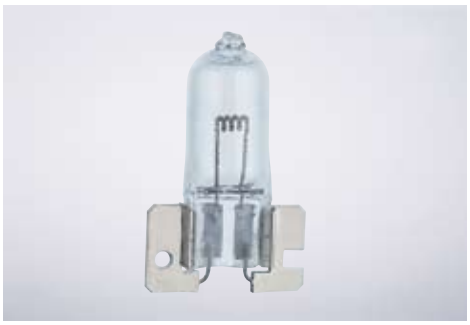
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00847521	22.8V 150W G6.35 axial	22.8	150	6.6	G6.35	14	48	32.5	2,800	1,000		S90	
00847524	24V 100W GY 6.35 axial	24	100	4.17	G6.35	12	44	30.5	2,200	1,000		S90	
00847139	24V 120W G6.35 axial	24	120	5	G6.35	11	44	29,9	2,500	800			

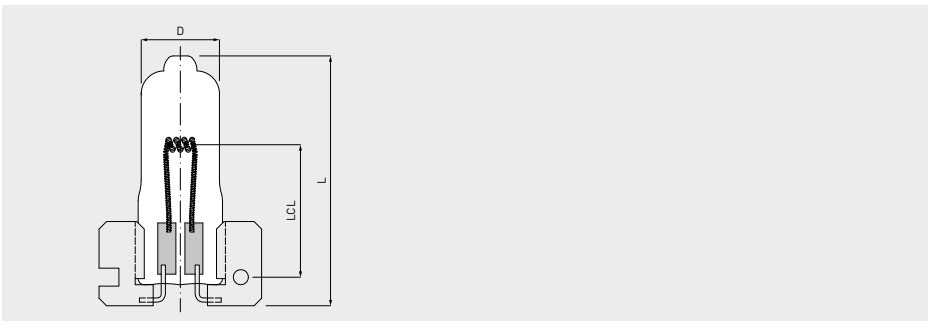
Halogen Lamps
Dental technology

For special features, specific benefits and areas of use see page 104

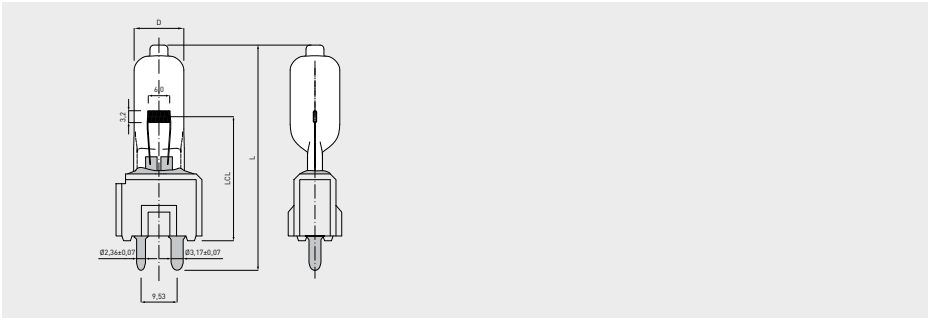


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847635	24V 35W P45t dome, matt	24	35		P45t	10	68	32.5	438	1,000			





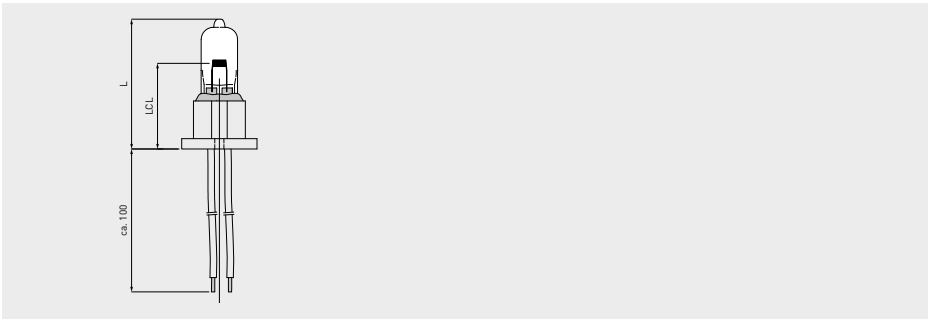
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847807	24V 100W A26/14 transversal	24	100	4.17	A26/14	14	41.5	22	2,500	500		S90	
00847514	24V 120W A26/14 transversal	24	120		A26/14	13	41		3,000	500		S90	



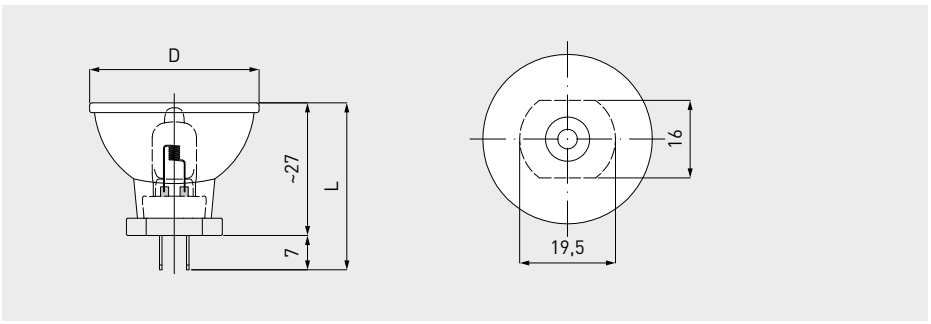
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8910242150	24V 150W GZ9.5 T.13x59 K234	24	150		GZ9.5	13	59	33		300			

Halogen Lamps
Dental technology

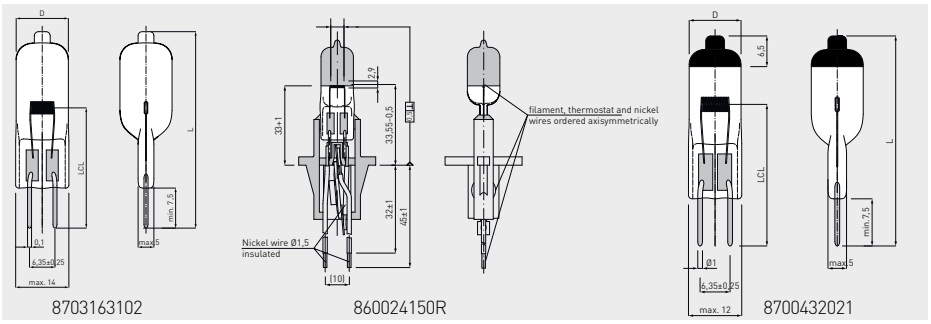
For special features, specific benefits and areas of use see page 104



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8702415000	24V 150W Halogen K214	24	150		Special	11	53	33	2,100	4,000			



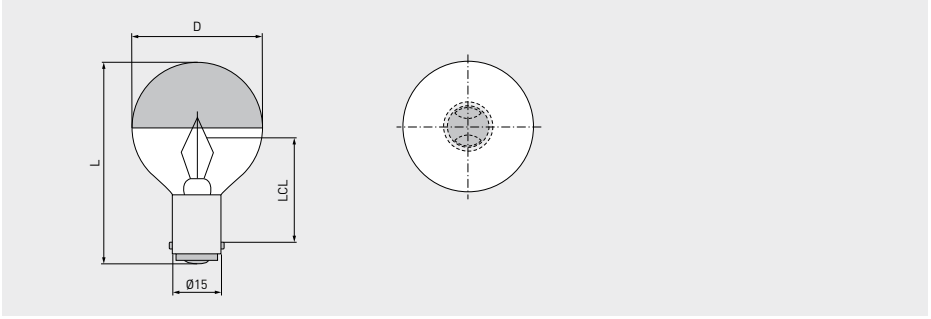
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847804	13V 80W G5.3-4.8 K118	13	80		G5.3								



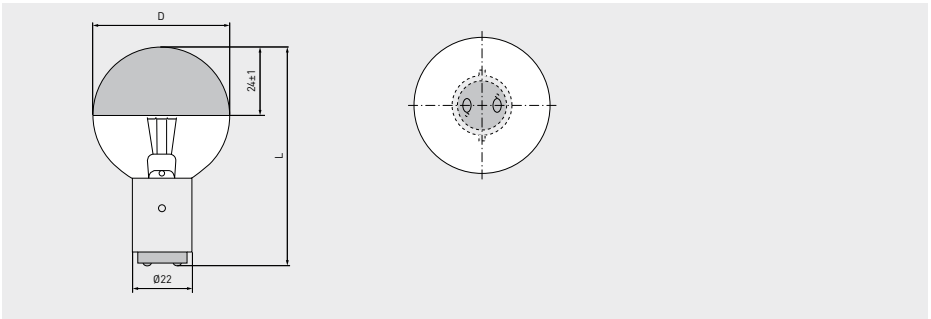
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individu-al life h	Burning position	PU
8703163102	Halogen lamp 20V 115W	20	115	5.75	G6.35	13	50	32	3,000	1,500			
860024150R	Halogen lamp 24V 150W fully assembled	24	150		special	13	99	32	700	3,200			
8700432021	Halogen lamp 22V 125W	24	150	6.25	G6.35	13	59	32	5,000	300			

Halogen Lamps
Dental technology

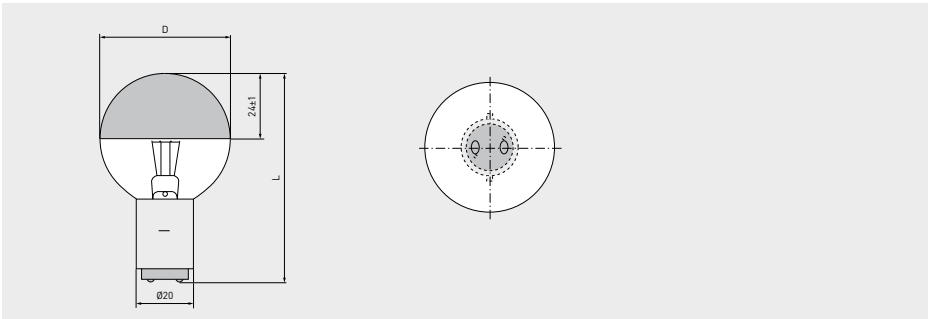
For special features, specific benefits and areas of use see page 104



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936030	110V 30W BA15d/19	110	30		BA15d	40	63	35	280	600			



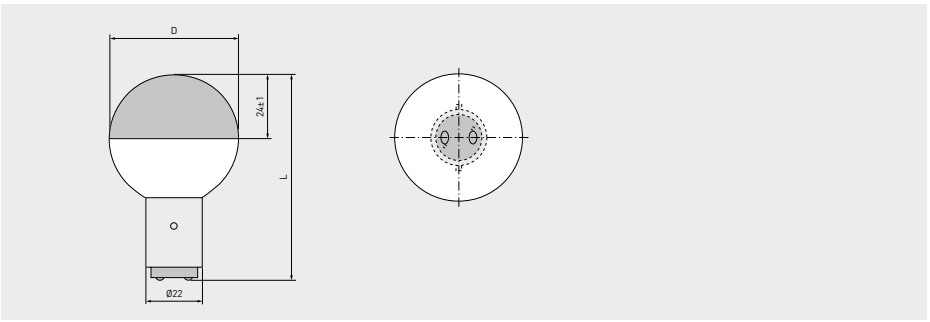
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936040	110V 50W BX22d	110	50		BX22d	50	86		500	600			
00936007	220-240V 50W BX22d	220-240	50		BX22d	50	82		370	1,000			
00936008	240V 50W BX22d	240	50		BX22d	50	82		370	1,000			



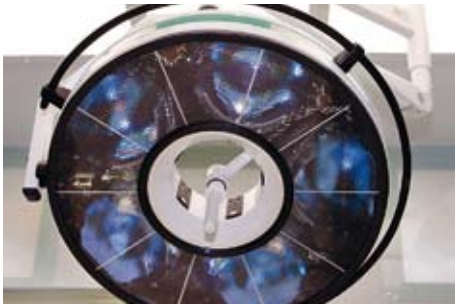
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936021	230V 50W Ba20d/26 50x80 kv	230	50		BA20d	50	80		370	1,000			

Standard lamps
Dental technology

For special features, specific benefits and areas of use see page 104



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00936034	110V 50W BX22d matt/mirror	110	50		BX22d	50	86		300	1,000			
00936037	220V 50W BX22d matt/mirror	220	50		BX22d	50	82		370	1,000			
00936010	220-240V 50W BX22d matt/mirror	220-240	50		BX22d	50	82		370	1,000			



Precision

Precision is crucial in an operation.
The operating team require sufficient bright light in order to be able to see exactly what is happening in the area being operated on. They must be able to judge what exactly is to be seen quickly and safely. Modern operating lights and high-precision operating lamps are of great assistance here.

The lamps must guarantee the highest possible precision in terms of filament position; they must be superbly manufactured and accordingly safe and they must provide good colour reproduction. This allows the recognition of the finest colour nuances in the tissue. The colours red and yellow predominate in wound areas, which makes natural, high-contrast reproduction all the more important.

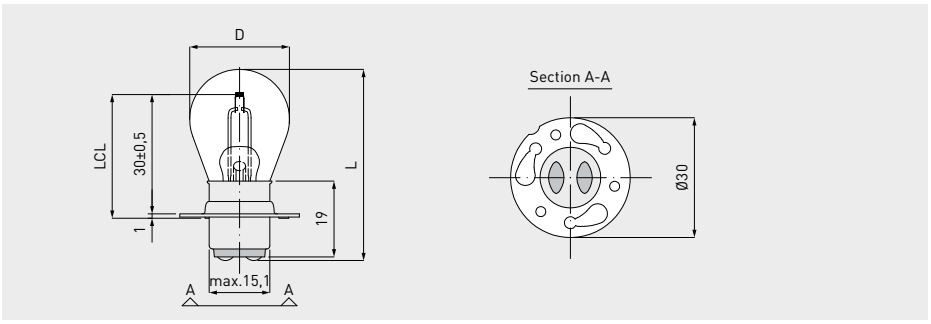
One further relevant criterion is low heat emission. Heat can dry up tissue and makes working conditions worse for those performing the operations.

Standard lamps
Operation lighting

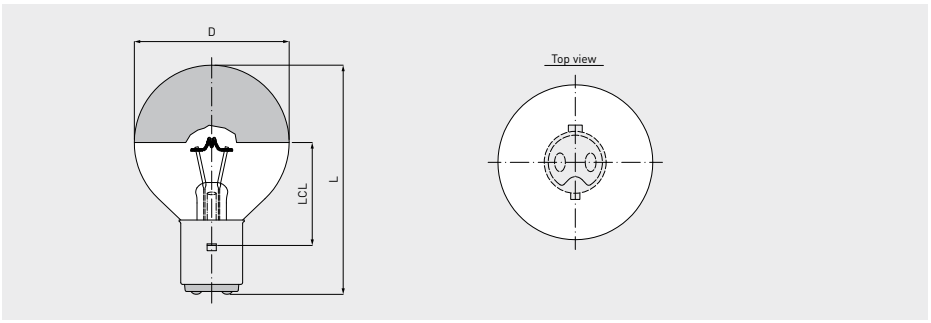
Special features:
- transparent, with mirrored or black dome
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- premium-quality inert gas filling
- different special caps available
- IR coating possible

Specific benefits:
- very precise positioning in the light
- optimum power concentration
- with IR coating: same luminosity with reduced heat emission
- high luminous flux
- high operating safety

Areas of use:
- in operating lamps



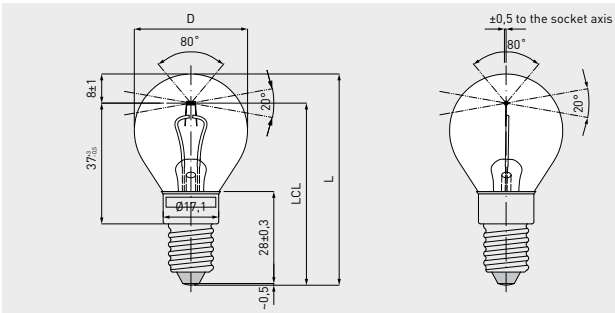
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843427	6.5V 2.75A P30s-ring 25x48 clear	6.5		2.75	P30s	25	48	30	300	100			
00843013	6V 15W S15d/19 with P30 ring	6	15		P30d	25	48	30.2	130	100			



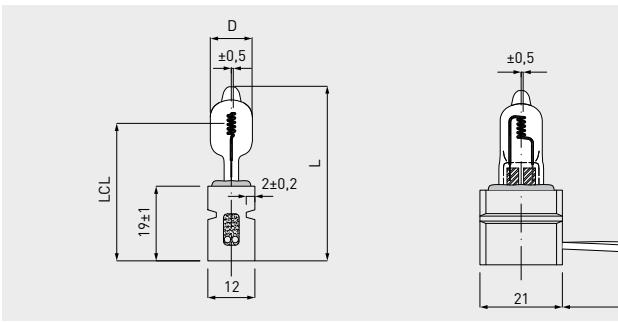
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00936018	12V 60W BA20d	12	60		BA20d	40	64		900	100			
00945027	12V 100W BA20d clear	12	100		BA20d	40	67		1,600	100			
00935026	12V 100W BA20d	12	100		BA20d	50	76		1,600	100			
00935037	24V 35W BA20d	24	35		BA20d	40	68		500	900			
00935043	24V 50W BA20d	24	50		BA20d	40	67		600	700			
00935068	24V 75W BA20d	24	75		BA20d	40	70		850	800			
00935156	24V 100W BA20d	24	100		BA20d	50	78		1,700	100			
00935051	42V 50W BA20d	42	50		BA20d	40	67		700	1,000			

Standard lamps
Operation lighting

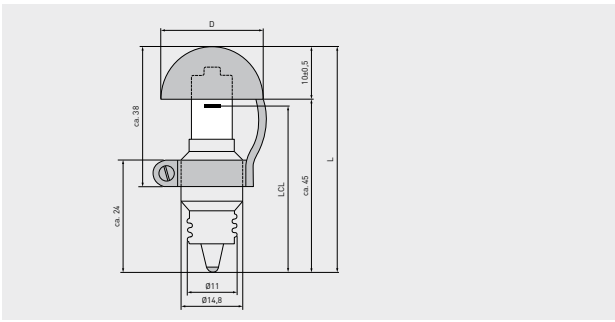
For special features, specific benefits and areas of use see page 114



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
X0843396	6V 4.5A E14	6		4.5	E14	36	64	56	480	400			



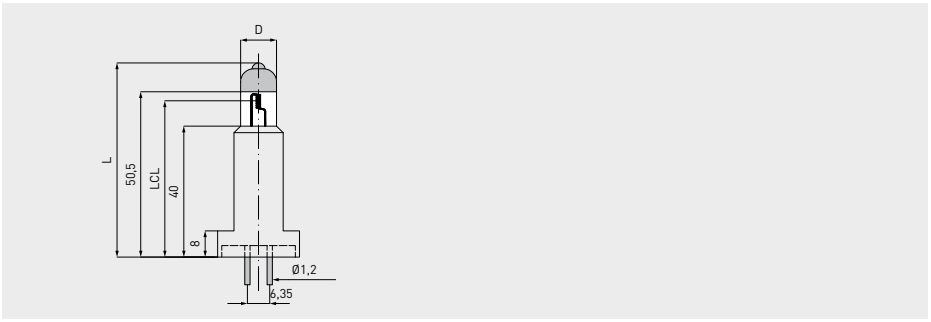
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847512	22.8V 110W ceramic cap +2-pole AMP St	22.8	110		special	11	46	35.25	2,900	700			



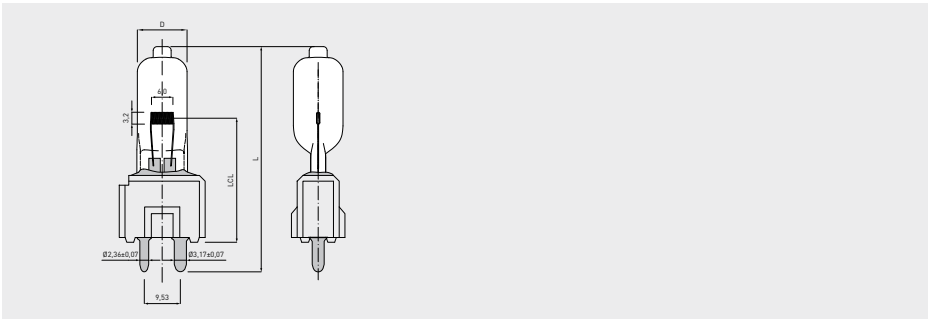
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
89002440BS	Halogen lamp 24V 40W Blackshield	24	40		E11	30	55	40	950	500			

Halogen Lamps
Operation lighting

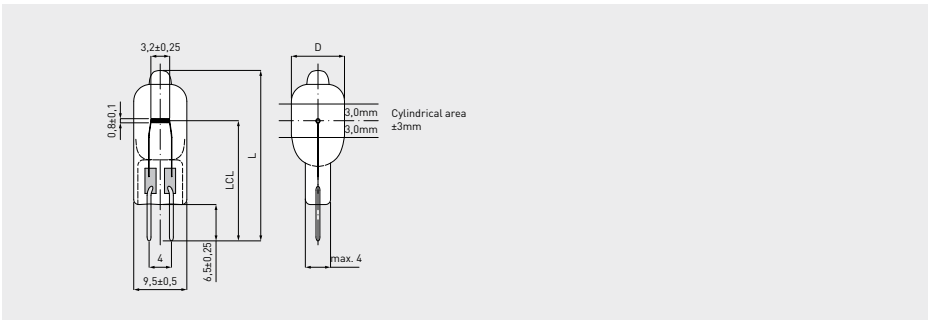
For special features, specific benefits and areas of use see page 114



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847067	24V 35W Special cap	24	35		Special	11	60	48.5	900	700			



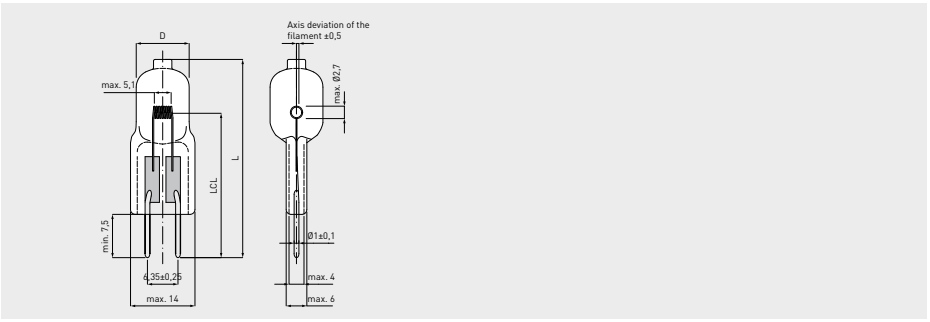
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847126	12V 100W GY 9.5 ceramic - Halogen	12	100		GY9	13	44	31	2,000	1,000			



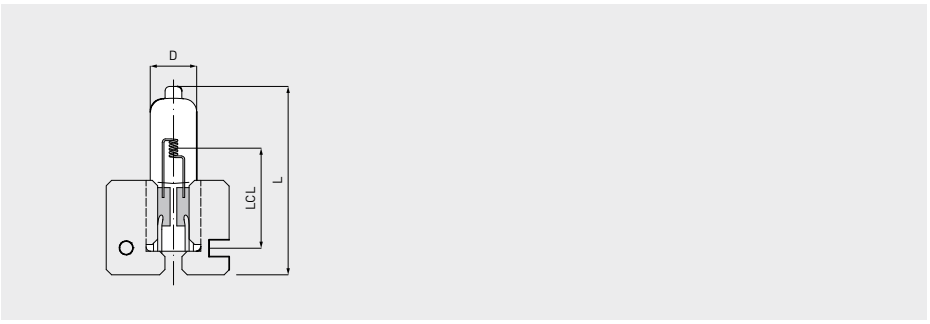
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847125	12V 20W G4	12	20		G4	9.5	30	19.5	400	2,000			

Halogen Lamps
Operation lighting

For special features, specific benefits and areas of use see page 114



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847129	12V 100W G6.35 2000lm Halogen	12	100		G6.35	11.5	42	30	2,000	1,000			

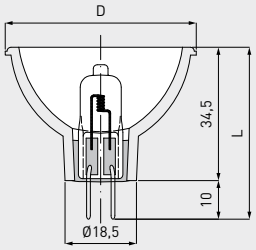


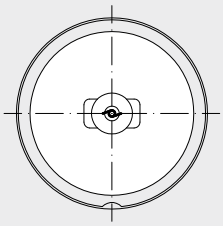
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847134	24V 80W A19.5/14 clear C8	24	80	3.33	A19.5/14	8	31	15.0	1,600	1,000			
00847153	24V 80W A22/14 clear C8	24	80	3.33	A22/14	8	30	18.0	1,600	1,000			
00847150	24V 100W A19.5/14 matt C8	24	100		A19.5/14	9	31	12.25	2,000	800			
00847130	24V 140W A26/14 clear CC6	24	140	5.83	A26/14	13	43	29	3,800	200			
00847137	24V 140W A26/14 clear CC6	24	140		A26/14	13	42	19.5	4,000	200			
8600023100	Halogen lamp 23V 100W ALM	23	100	4.35	X-514	13	48	15	2,500	300			
8600024100	Halogen lamp 24V 100W X-514	24	100		X-514	13	48						

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8800042150	42V 150W GY 6.35	42	150	3.6	G6.35	15	47	32	2,800	1,000			

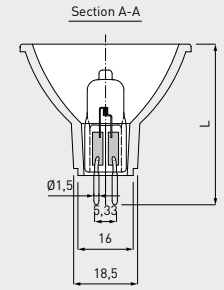
Halogen Lamps
Operation lighting

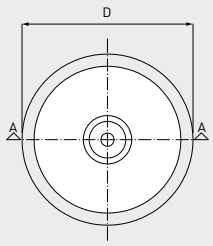
For special features, specific benefits and areas of use see page 114



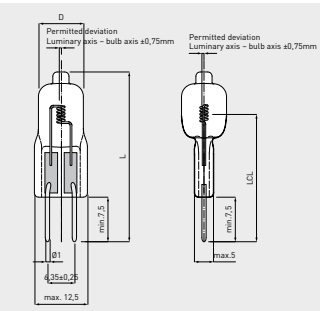


Article no.	Description	V	W	Am-perage	Cap	ref ector diameter mm	Total length L max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00847160	22.8V 50W GX 5.3 axial short with reflector	22.8	50		GX5.3	50	44.5		1,100	700			





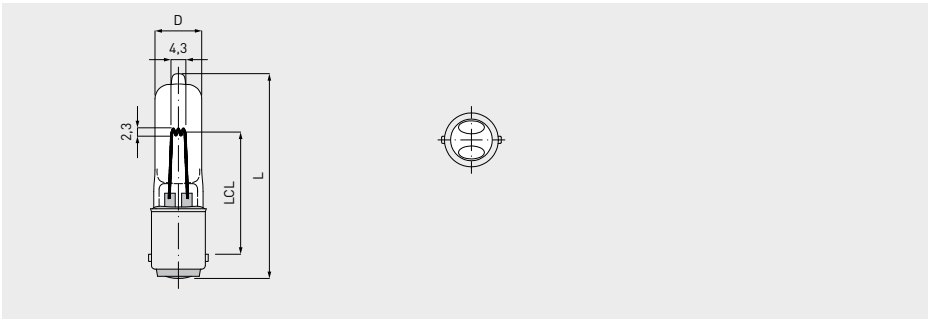
Article no.	Description	V	W	Am-perage	Cap	ref ector diameter D mm	Total length max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00847806	22.8V 30W GX5.3	22.8	30	1.3	GX5.3	50	46.5		600	800			



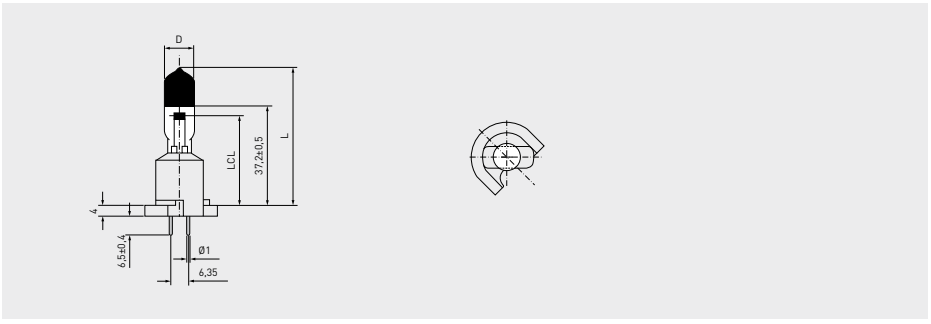
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
860022840A	22.8V 40W G6.35 axial 700lm	22.8	40		G6.35	11	44	31.25	700	1,000		S90	
860022840T	22.8V 40W G6.35 transversal	22.8	40	1.75	G6.35	12	44	30.5	800	1,000		S90	
86022850AX	22.8V 50W G6.35 axial	22.8	50	2,2	G6.35	11	44	30.5	1,100	700		S90	
860022850T	22.8V 50W G6.35 transversal	22.8	50	2,2	G6.35	11	44	30.5	950	1,000		S90	
8600255000	22.8V 50W G6.35 axial	22.8	50		G6.35	11	44	30.5				S90	
87022840AX	Halogen lamp 22.8V 40W AX	22.8	40		G6.35	11	44	30.5	900	800		S90	
87022850AX	Halogen lamp 22.8V 50W AX special	22.8	50		G6.35	11	44	30.5	1,100			S90	

Halogen Lamps
Operation lighting

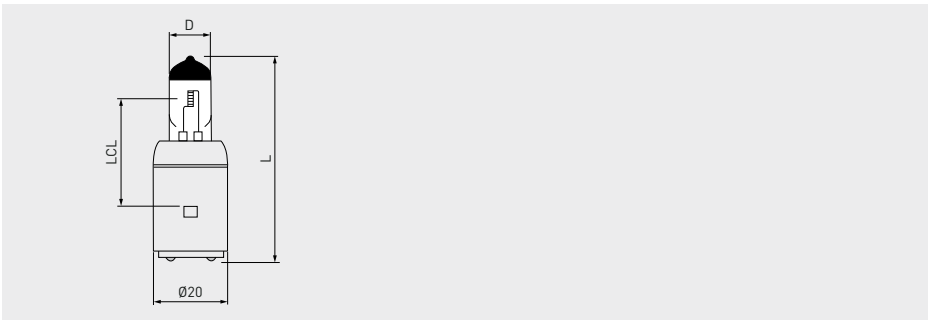
For special features, specific benefits and areas of use see page 114



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847527	24V 60W Ba15d/19 13x58 clear cc-6	24	60		Ba15d	13	58	34.5	1,300	700			



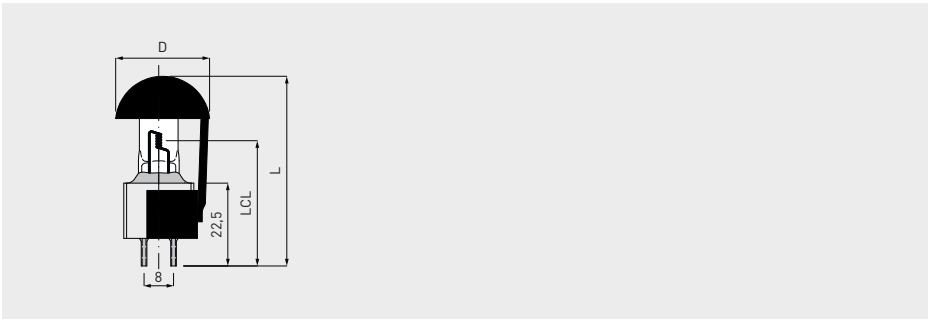
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8700215130	Halogen lamp 21.5V 130W	21.5	130		Special	12	53	33.5	3,500	1,000			



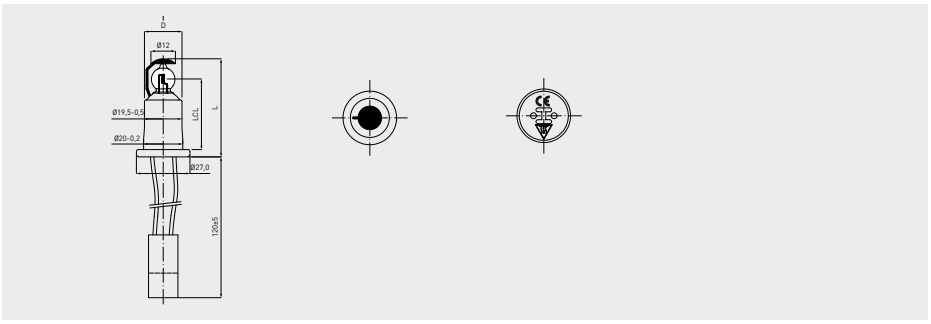
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8700245020	Halogen lamp 24V 50W BA20d	24	50		BA20d	11	56	30	1,000	100			

Halogen Lamps
Operation lighting

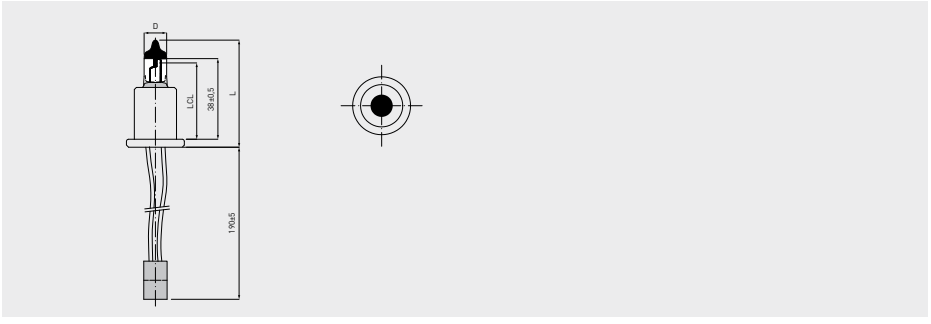
For special features, specific benefits and areas of use see page 114



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
8910002040	24V 40W axial silver cap	24	40	1.67		26	52	34	900	1,000			
8910002050	24V 50W axial silver cap	24	50	2.08		26	52	34	1,000	1,000			



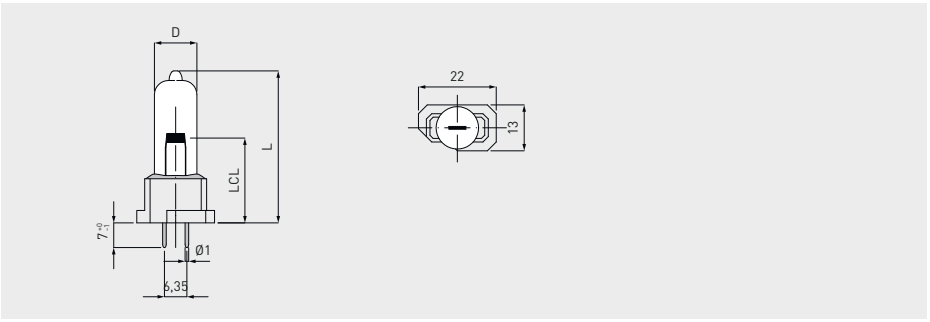
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00847805	22.8V 40W IRC	22.8	40		Special	12	51	36.5	1,200	800			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
860002450K	Halogen lamp 24V 50W ceramic/flex	24	50		Special	12	240	36.5	850	600 bei 22.8V			

Halogen Lamps
Operation lighting

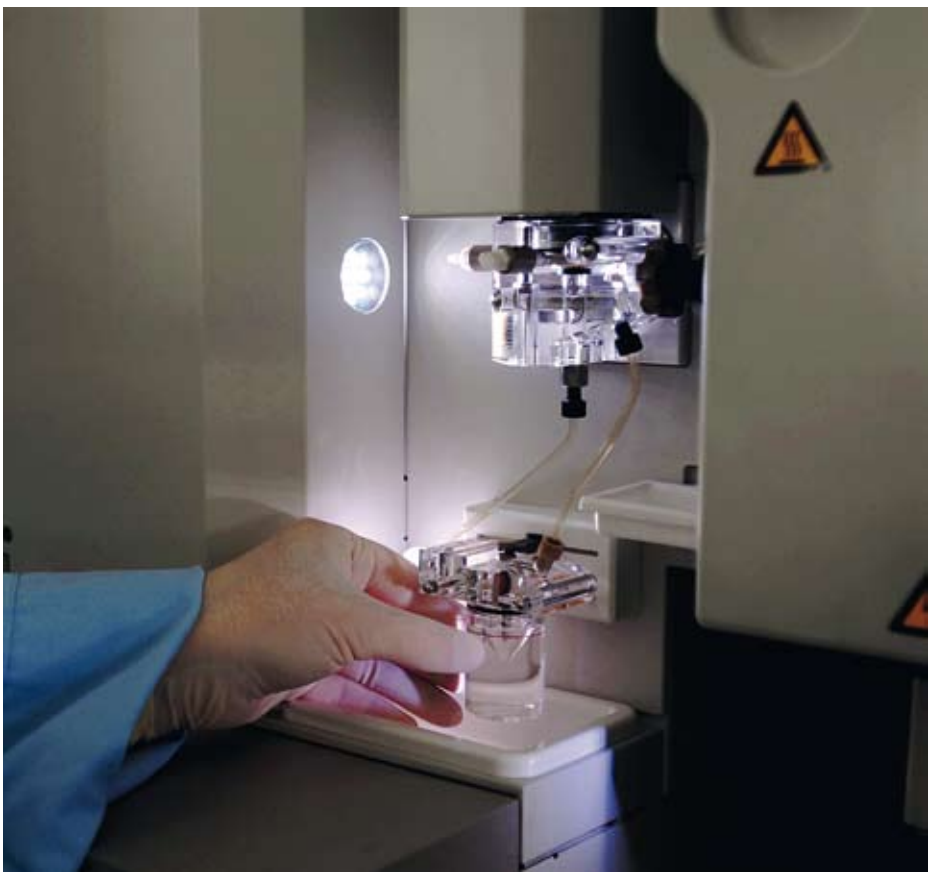
For special features, specific benefits and areas of use see page 114



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
9100BLUE90	22.8V 90W Blue 90	22.8	90		Special	12	50	24	2.600	250			

Exactness

Many experimental and analytical techniques in medicine and research depend on good, colour-neutral and reliable light. In addition, the light source must only emit a minimum of heat but still provide sufficient light.
Whether it is a blood analysing device or an endoscope, the quality of the knowledge and results also depends causally on the quality of the DR FISCHER lamps. We are well aware that we have a serious responsibility here.



Halogen Lamps

For other medical lamps

Special features:

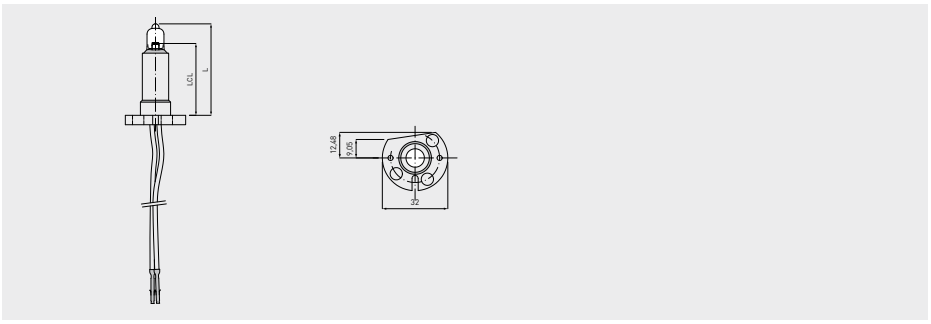
- clear halogen lamps
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- premium-quality inert gas filling
- different special caps available

Specific benefits:

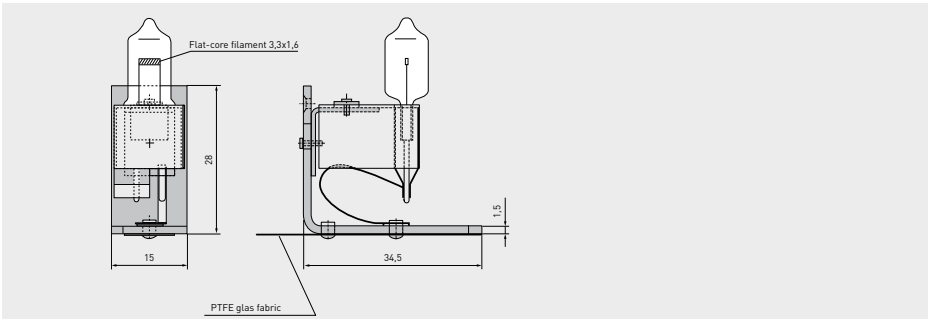
- very precise positioning in the device
- very well suited to compact optical systems
- constant, stable results even after lamp change (no re-centring required)
- high operating safety

Areas of use:

- various medical equipment



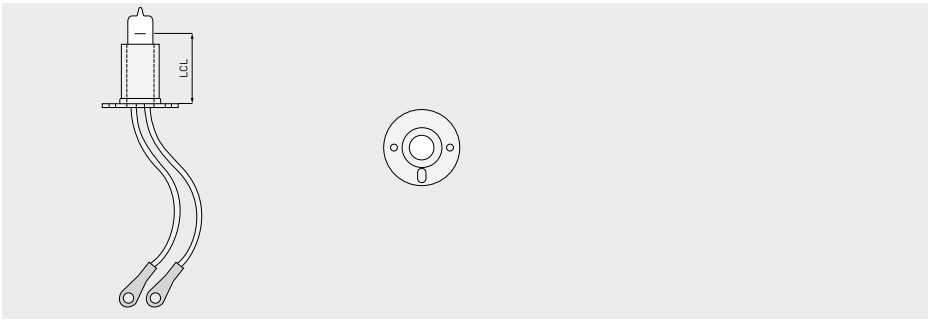
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847530	12V 20W Special cap with cable clear glass	12	20		Special								



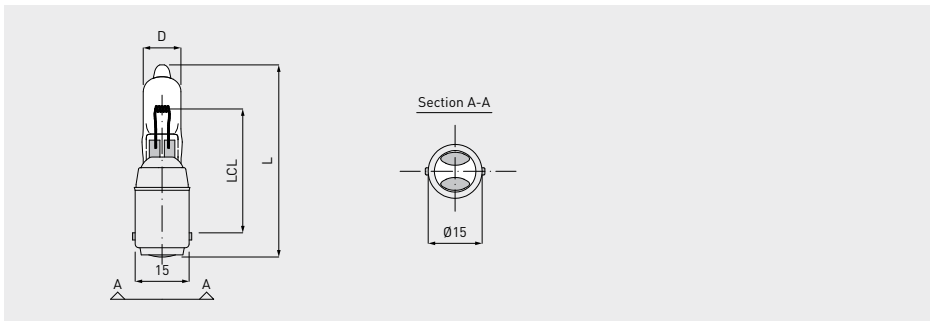
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
890001250W	coil lamp 12V 50W	12	50		Special				1,200	50			

Halogen Lamps
For other medical lamps

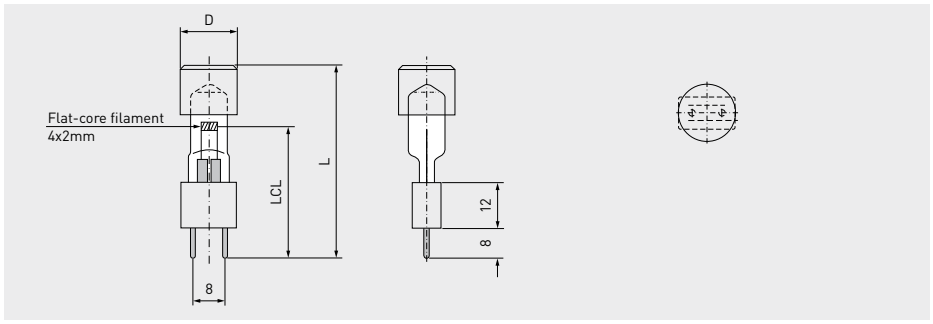
For special features, specific benefits and areas of use see page 124



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8901220P15	12V 20W Special	12	20		Special	9	39		360	2,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8900245015	Halogen lamp 24V 50W BA 15d	24	50		BA15d	11	55	35					

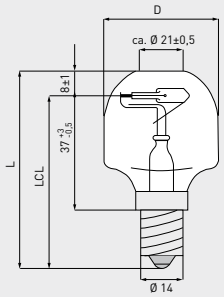


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
89002450BT	Halogen lamp 24V 50W DKK	24	50		G8	15	53	35.5	1,200	500			

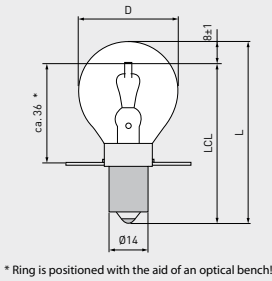
Halogen Lamps

For other medical lamps

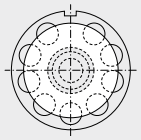
For special features, specific benefits and areas of use see page 124



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847058	7.5V 38W E14 with enveloping bulb	7.5	38		E14	38	64	37	730	500			



* Ring is positioned with the aid of an optical bench!



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843096	6V 4.5A E14 with 9-hole ring	6		4.5	E14	36	64		480	100			
00845260	6V 4.5A E14 with ring (flat-core filament)	6		4.5	E14	36	64		450	500			

Halogen Lamps
For other medical lamps

Contents

Showtime

Special demands are made on lamps for use in studios or on stages. These demands involve light luminosity, low heat build-up and precision of filament positioning in order to enable the highest possible light yield and the highest possible precision of light emission.

In film, television and photo studios, beam lamps are used to improve picture quality. They make it possible to reduce exposure times or use smaller aperture, which decreases movement blur and increases depth of field.

In addition, flash beam lights are also used in photo studios that contain a conventional light source and a flashbulb.
Beam lamps are even used on film shoots outside buildings to improve illumination or change the atmosphere.

DR FISCHER Group lamps highlight the most important things and put them in their true perspective.

Photo, studio and stage lamps			128
Studio and stage lamps			**130**
Low-voltage	**Projection lamps**	For studio and stage projectors	132
Low-voltage halogen	**Projection lamps**	For studio and stage projectors	136
High-voltage	**Projection lamps**	For studio and stage projectors	137
Photo lamps			**140**
High-voltage	**Photo lamps**	Set lights for B/W and colour photography	142
	Photo lamps	Set lights for B/W and colour photography and video	143
	Photo lamps	Darkroom lamps (B/W photography)	145
	Photo lamps	Enlarger lamps (B/W photography)	146

Raise the curtains!

Drama is the sine qua non in the studio and on stage. Light is part of the setting – in the studio and on stage. It must illuminate a point precisely or create an image of space. Light can create atmospheres, it can concentrate and focus, it can also distract and alienate equally well.
But what it is also used for, its part too, is to be reliable and it must be available without "airs".

Projection lamps

For studio and stage projectors

Special features:

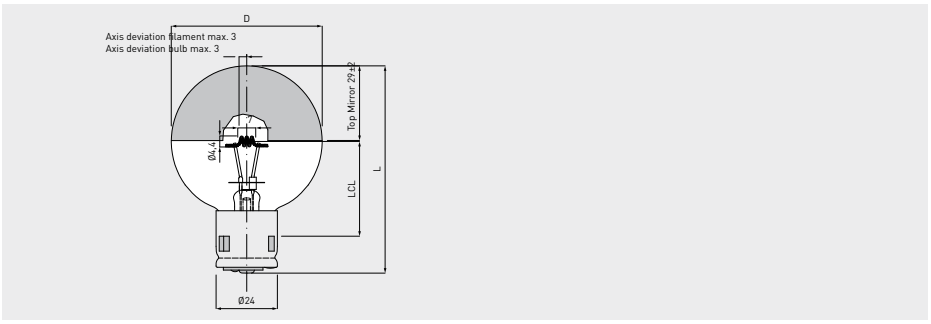
- precision of manufacture, minimum tolerances in the positioning of the filaments
- low-voltage and high-voltage lamps
- available with mirrored heads, mirrored sides or transparent

Specific benefits:

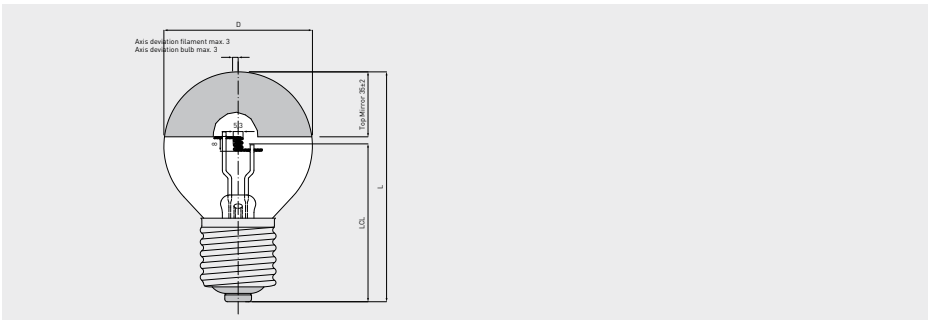
- the highly precise filament position guarantees, in combination with the lamp, optimum light concentration
- very high luminous flux

Areas of use:

- photography
- studio
- stage
- planetariums



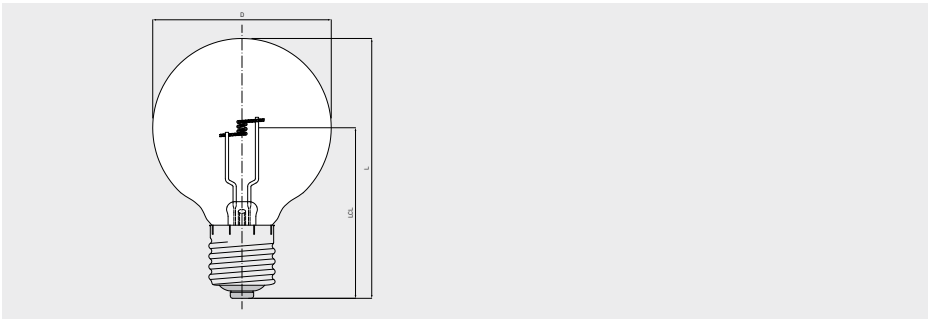
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
R0832029	24V 200W B24s-3 60x86.5 kv	24	200		B24s-3	61	86.5	38	3,800	100		S135	



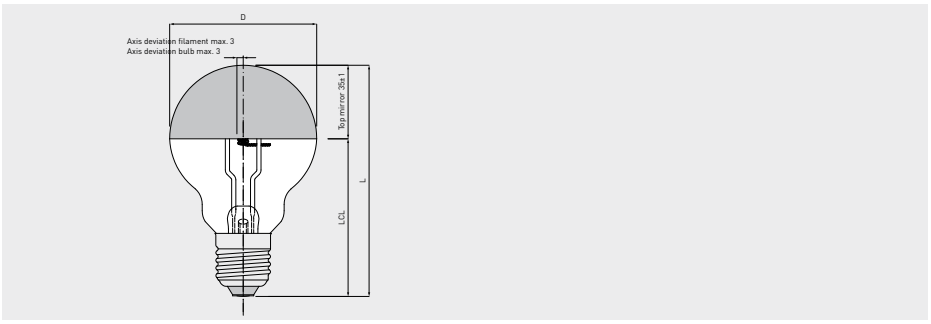
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
77935198	24V 250W E40 with 80 mm bulb	24	250		E40/45	81	129	85	5,500	50		S135	
00835198	24V 250W E40 with 70mm bulb	24	250		E40/45	71	125	85	5,500	50		S135	

Projection lamps
For studio and stage projectors

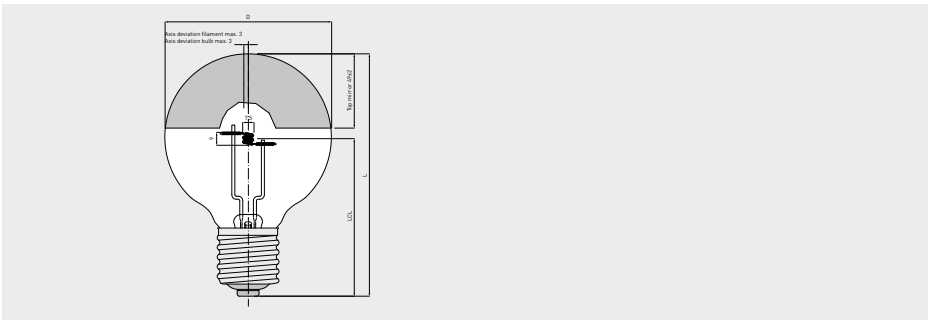
For special features, specific benefits and areas of use see page 132



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
77945198	24V 250W E40 with 80mm bulb clear	24	250		E40	81	128	85	5,500	50		S135	
00843430	24V 500W E40 110x168 clear	24	500		E40/45	111	165	105	13,000	100		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00833361	24V 250W E27	24	250		E27	71	115	75	5,500	50		S135	

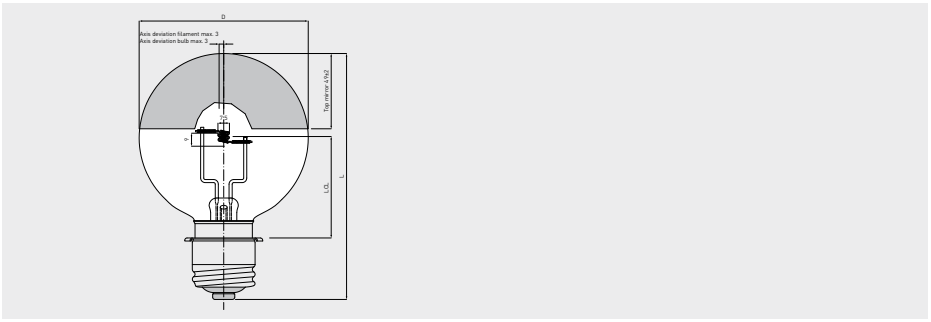


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00835255	24V 500W E40	24	500		E40/45	111	168	108	10,000	50		S135	

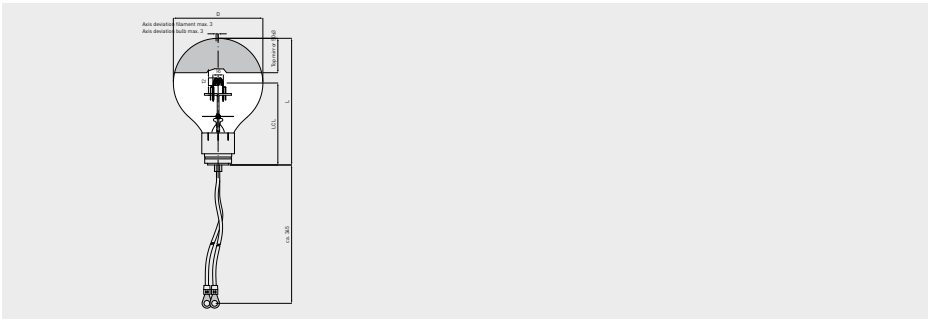
Projection lamps

For studio and stage projectors

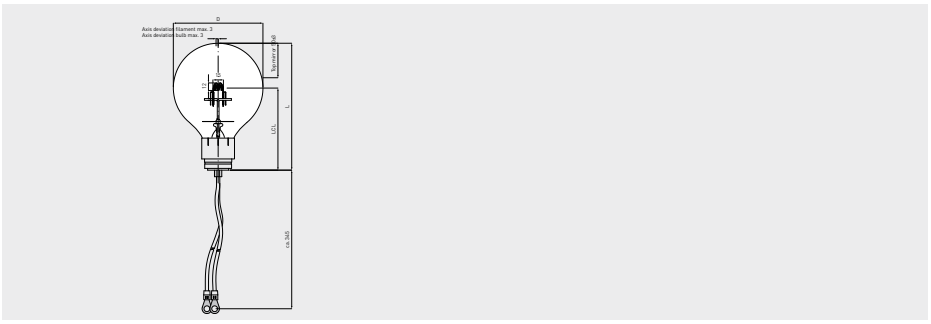
For special features, specific benefits and areas of use see page 132



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00835285	24V 500W P40s kv	24	500		P40s/41	111	167	67	10,000	50		S135	



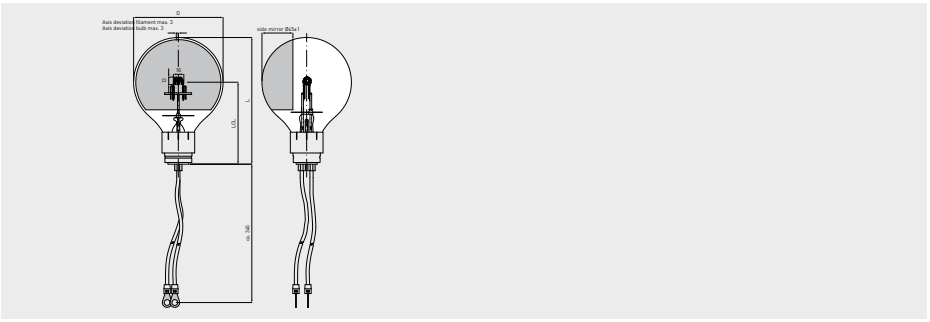
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00835254	24V 1,000W K39D kv	24	1,000		K39D	131	189	119	17,500	100		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845254	24V 1,000W K39D clear	24	1,000		K39D	131	189	119	17,500	100		S135	

Projection lamps
For studio and stage projectors

For special features, specific benefits and areas of use see page 132



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00835257	24V 1,000W K39D SM	24	1,000		K39D	131	189	119	17,500	100		S135	

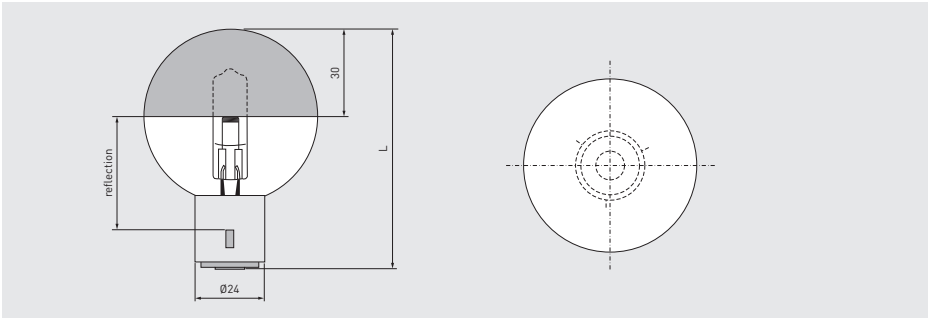
Projection lamps

For studio and stage projectors

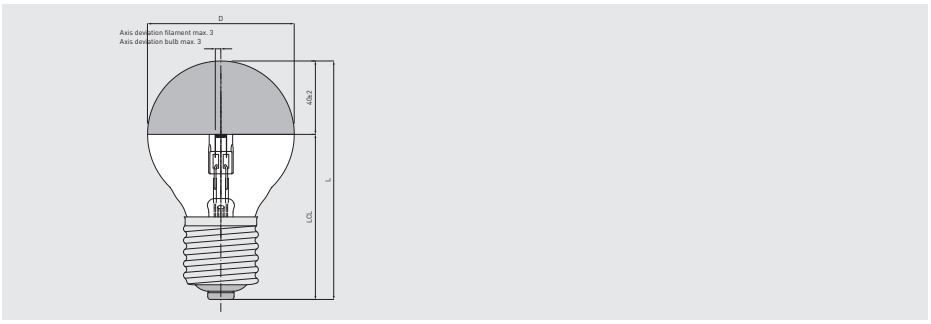
Special features:
- halogen lamps as an alternative to the conventional version
- low power consumption
- classified as energy efficiency class B

Specific benefits:
- longer life
- virtually no reduction of lumen
- energy-saving

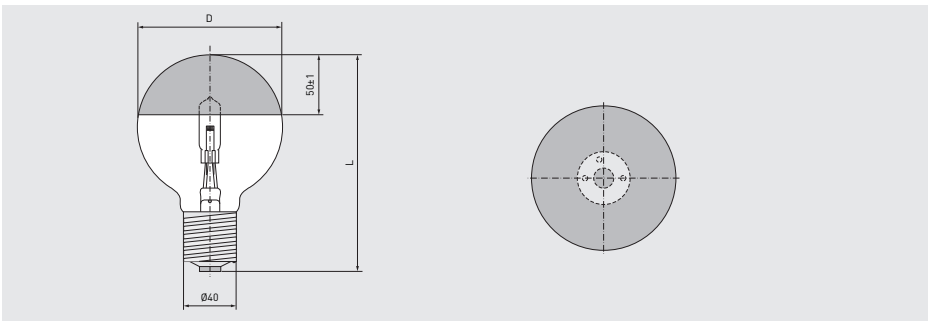
Areas of use:
- studio
- stage



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00937082	24V 200W B24s-3 Halogen w. enveloping bulb	24	200		B24s-3	61	85		2,900	300		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00937083	24V 250W E40 Halogen w. enveloping bulb	24	250		E40/45	81	131	90	4,500	250		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00937085	24V 500W E40 Halogen w. enveloping bulb	24	500		E40/45	111	167		9,000	300		S135	

Projection lamps

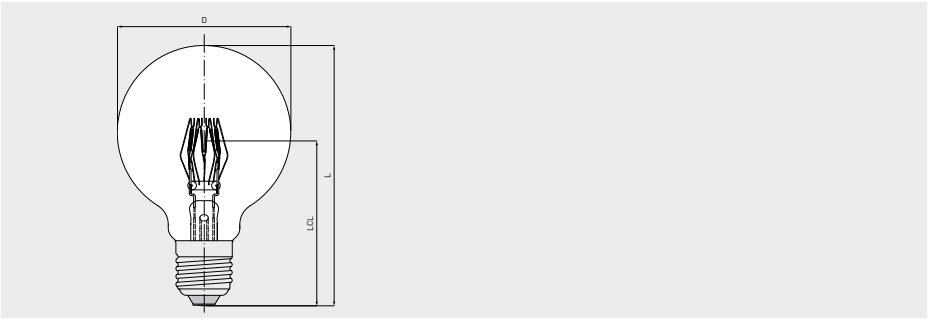
For studio and stage projectors

Special features:
- precision of manufacture, minimum tolerances in the positioning of the filaments
- low-voltage and high-voltage lamps
- available with mirrored heads, mirrored sides or transparent

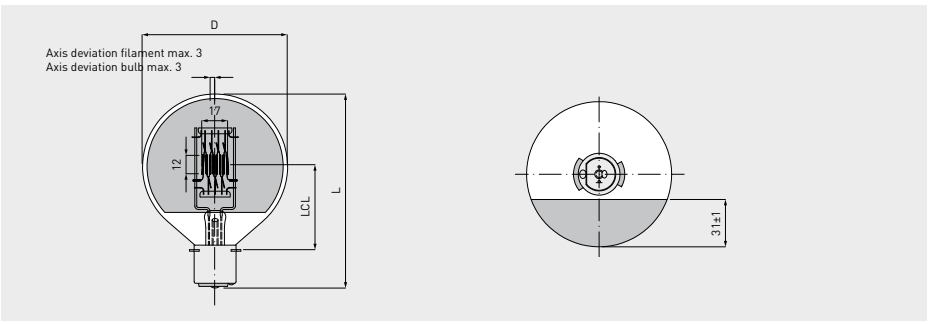
Specific benefits:
- the high-precision filament position in combination with the light ensures optimum power concentration
- very high luminous flux

Areas of use:
- photography
- studio
- stage
- planetariums

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
R0835281	220V 500W E40/45 110x168 kv	220	500		E40/45	111	168	108	8,400	200		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00844067	230V 250W E27	230	250		E27	81	125	76	3,200	500		S135	

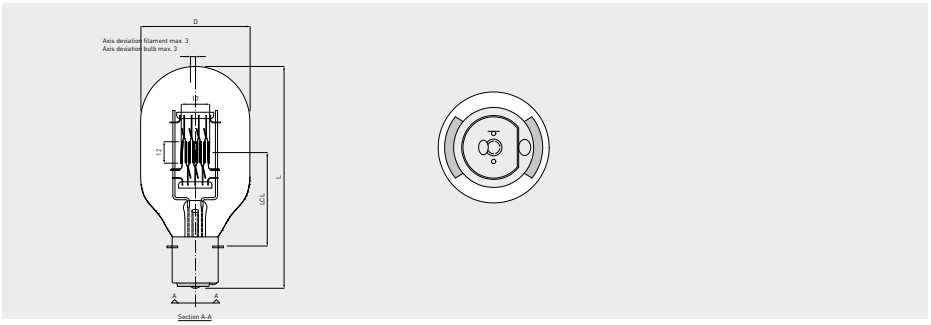


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
R0835279	230V 500W P28s G95/137SV	230	500		P28s	95	130	55.6	10,800	100		S135	

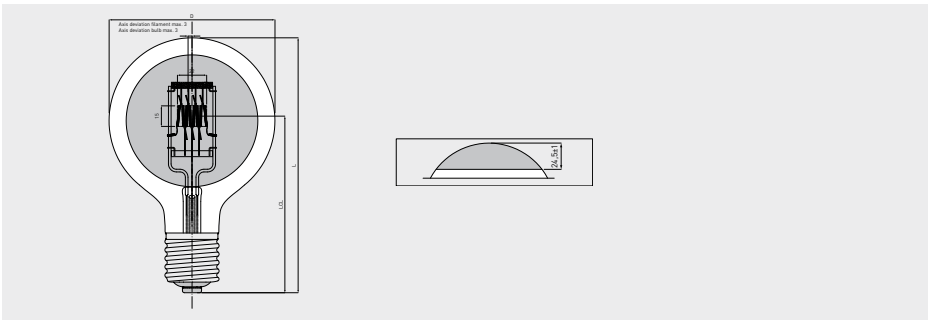
Projection lamps

For studio and stage projectors

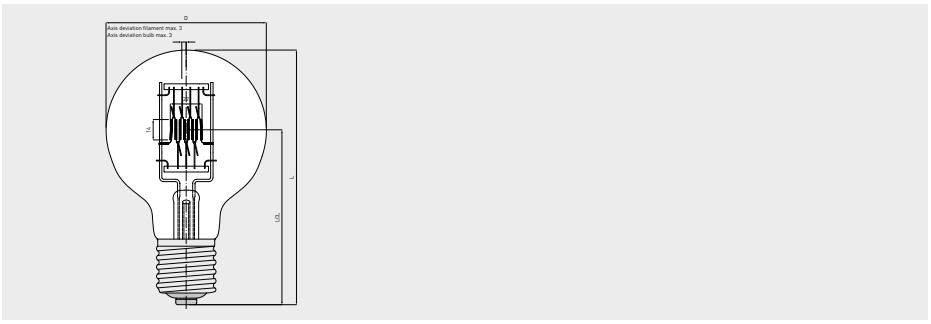
For special features, specific benefits and areas of use see page 137



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
R0835278	230V 500W P28s T65x136 clear	230	500		P28s	66	136	55.6	10,800	100		S45	



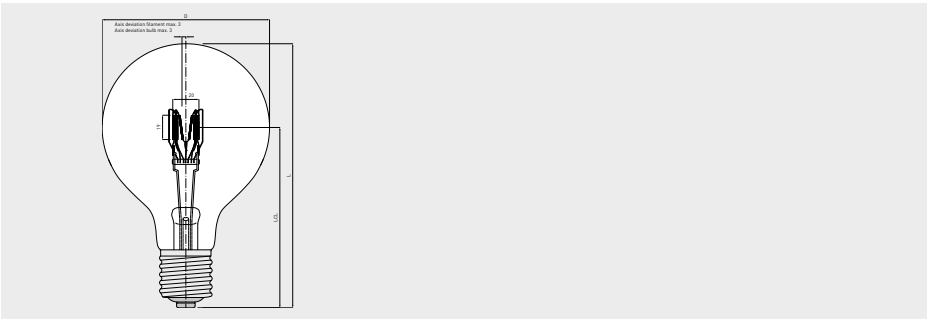
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
R0835282	230V 1,000W E40 125x193 SM	230	1,000		E40/45	126	193	133	22,000	100		S45	



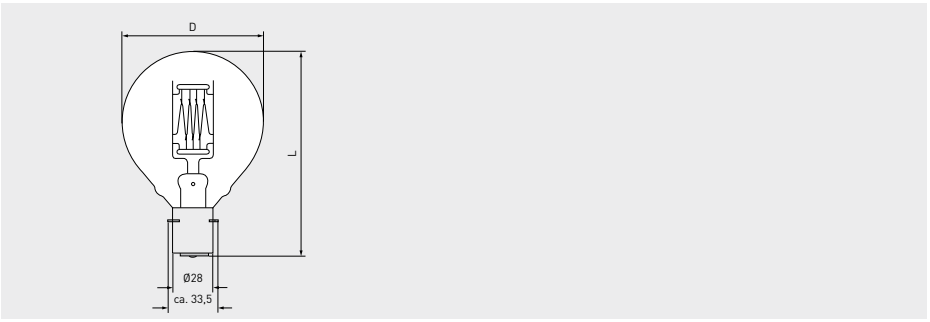
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
R0843415	230V 1,000W E40/45 110x180clear	230	1,000		E40	111	180	120	23,000	100		S45	

Projection lamps
For studio and stage projectors

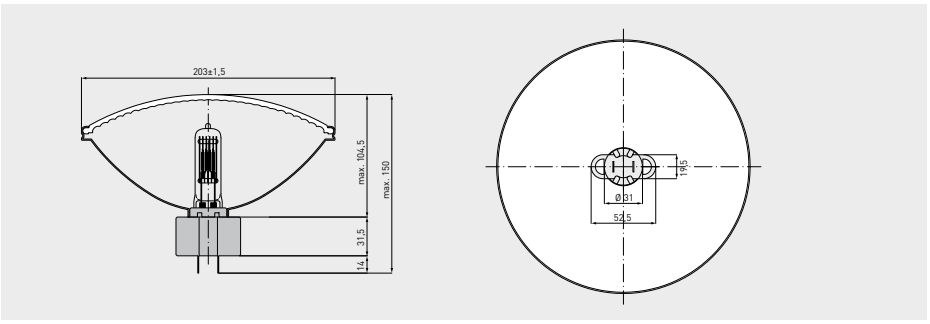
For special features, specific benefits and areas of use see page 137



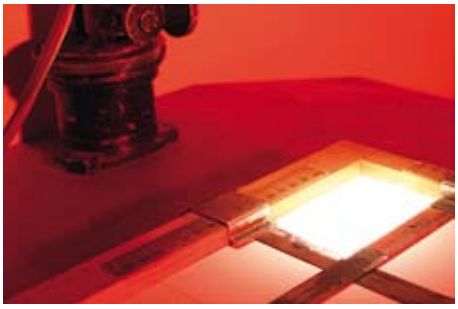
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843400	230V 1,000W E40 clear 130x211 clear	230	1,000		E40/45	131	211	140	18,000	500		S135	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
70945200	240V 500W P28s	240	500		P28s/33	96.5	137	55.6	9,900	200			



Article no.	Description	LIF Code	V	W	Amperage	Cap	Diameter mm	Total length max. mm	Luminous f ux cd	Average life h	Individual life h	Burning position	PU
00847886	PAR64 Alu VNSP	CP / 86	230	500		GX16d	203	150	245,000	300			
00847887	PAR64 Alu NSP	CP / 87	230	500		GX16d	203	150	145,000	300			
00877888	PAR64 Alu MFL	CP / 88	230	500		GX16d	203	150	700,000	300			
00847860	PAR64 Alu VNSP	CP / 60	230	1,000		GX16d	203	150	355,000	300			
00847861	PAR64 Alu NSP	CP / 61	230	1,000		GX16d	203	150	302,000	300			
00847862	PAR64 Alu MFL	CP / 62	230	1,000		GX16d	203	150	143,000	300			
00847960	PAR64 Alu VNSP		230	1,000		GX16d	203	150	320,000	800			
00847961	PAR64 Alu NSP		230	1,000		GX16d	203	150	270,000	800			
00847962	PAR64 Alu MFL		230	1,000		GX16d	203	150	115,000	800			



Photography is painting in light

Light is the foundation of photography. Photography means painting in light. Only light can put a picture on film or chip and only light can create a print. And a motif that isn't illuminated cannot make a picture.
So lamps are necessary in all kinds of places here: studio lamps for illumination, flashbulbs, to create depth and sharpness, darkroom lamps, to be able to see something without disrupting the developing process; the lamps in the imagesetters that put the film onto photo paper.
Photo lamps have a considerably higher light yield than normal incandescent light bulbs (up to twice as much as normal household light bulbs) and pre-defined colour temperatures; with type B photo lamps roughly 3100 to 3200 Kelvin, with type A about 3400 Kelvin.
Different demands are made on all these lamps in terms of luminosity and light colour. Depending on their use and how much use they undergo, life can vary enormously.

The DR FISCHER Group are one of the few manufacturers of special photo lamps.

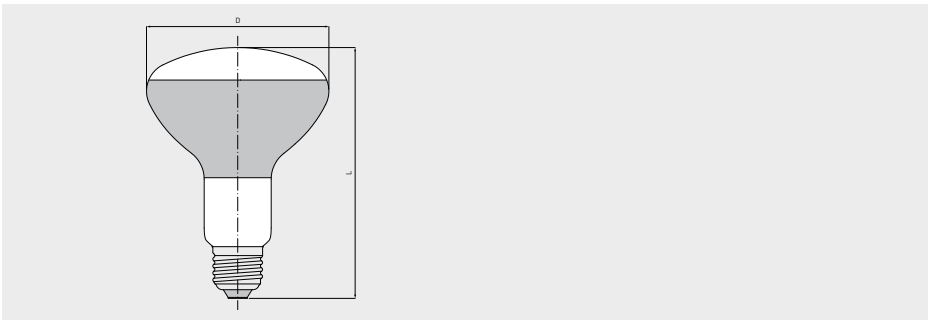
Photo lamps

Set lights for B/W and colour photography

Special features:
- correspond to Philips Argaphoto lamps
- high-quality materials
- light colour: 3200 K
- matt on the inside
- mirrored on the inside ('R' in the description)

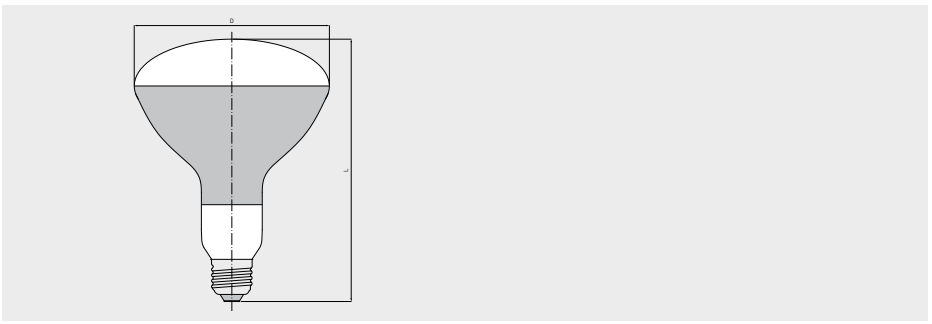
Specific benefits:
- conventional devices can still be used
- the specification of the lamps corresponds to the specification of these devices
- the light colour corresponds to the specification of these devices

Areas of use:
- dark room/set lights for B/W and colour photography



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Colour temperature K	Burning position	PU
77841423	220V 150W E27/27 R.95x131	220	150		E27	96	135			100	3,200	any	

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Colour temperature K	Burning position	PU
77841407	220V 500W E27 A.80x165	220	500		E27	81	165		11,000	100	3,200	any	
77841409	240V 500W E27 A.80x165	240	500		E27	81	165		11,000	100	3,200	any	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Colour temperature K	Burning position	PU
77841410	220V 500W E27 R125x168	220	500		E27	126.5	171			100	3,200	any	
77841411	240V 500W E27 R125x168	240	500		E27	126.5	171			100	3,200	any	

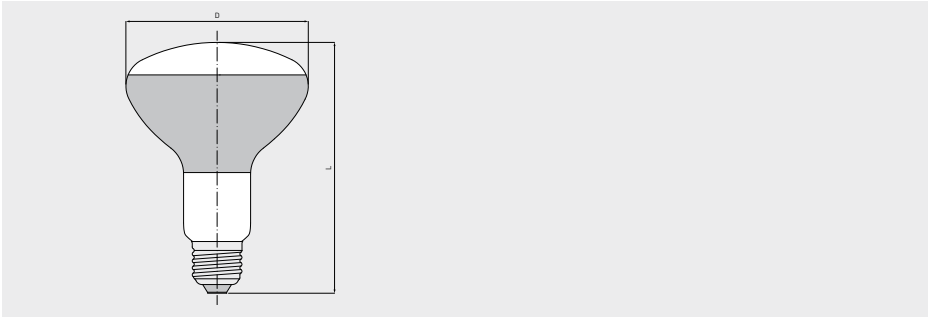
Photo lamps

Set lights for B/W and colour photography and video

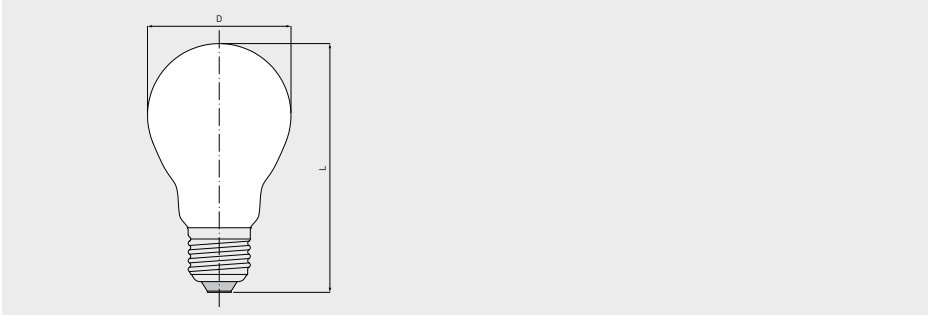
Special features:
- correspond to Philips Photolita lamps
- matt on the inside
- mirrored on the inside ('R' in the description)
- colour temperature adapted for B/W and colour films

Specific benefits:
- diffuse yet uniform light distribution
- higher efficiency due to internal reflector

Areas of use:
- set lights for B/W and colour photography and video



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Colour temperature K	Burning position	PU
77841420	220V 250W E27/27 R.95x131	220	250		E27	96	135			3	3,400	any	

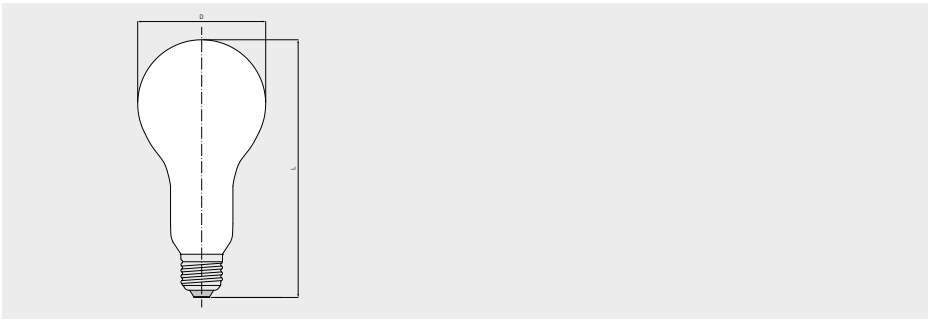


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Colour temperature K	Burning position	PU
77841401	220V 250W E27/27 A.60x104	220	250		E27	61	107		7,500	3	3,400	any	
77841402	230V 250W E27/27 A.60x104	230	250		E27	61	107		7,500	3	3,400	any	
77841404	240-250V 275W E27/27 A.60x104	240-250	275		E27	61	107		7,400	3	3,400	any	
77841405	250V 250W E27/27 A.60x104	250	250		E27	61	107		7,500	4	3,400	any	

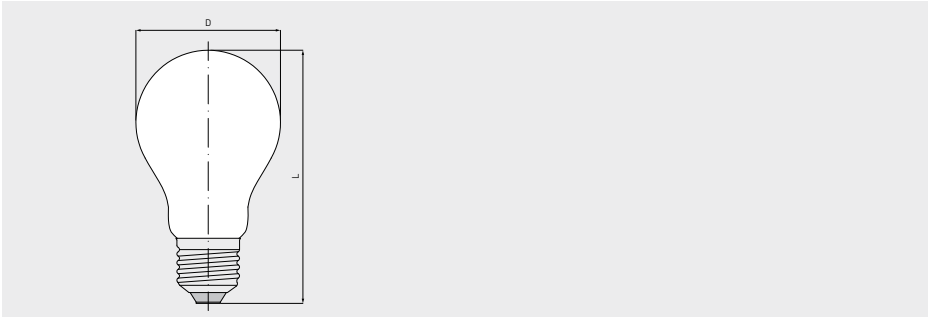
Photo lamps

Set lights for B/W and colour photography and video

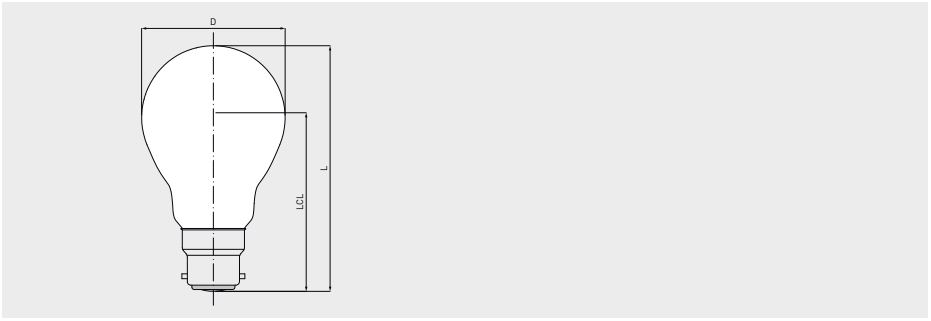
For special features, specific benefits and areas of use see page 143



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Colour temperature K	Burning position	PU
77841413	240V 500W B22d A.80x159.5	240	530		B22d	81	163.5		14,400	6	3,400	any	
77841414	220V 500W E27 A.80x166	220	530		E27	81	165		14,400	6	3,400	any	
77841408	240V 500W E27 A.80x166	240	500		E27	81	165		14,400	6	3,400	any	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Colour temperature K	Burning position	PU
00845275	230V 250W E27/27 60x105 blue	230	250		E27	61	105		3,400	25	ca. 4,000		



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Colour temperature K	Burning position	PU
77841403	240-250V 275W B22d A.60x102.5	240-250	275		B22d	61	105.5		7,400	4	3,400	any	

Photo lamps

Darkroom lamps (B/W photography)

Special features:

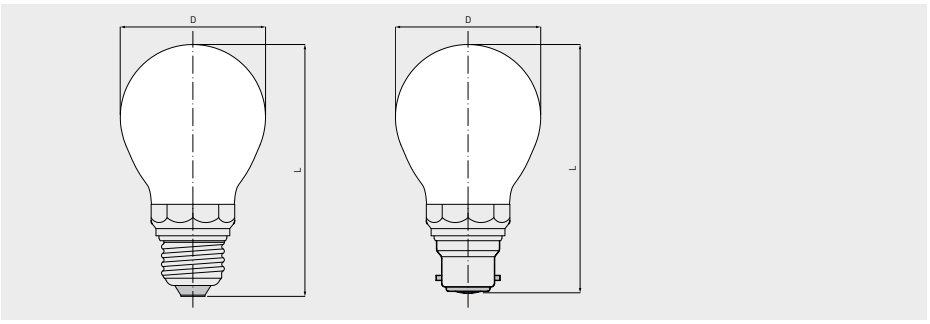
- correspond to Philips dark room lamps
- high-quality materials
- cadmium-free internal coating
- yellow-green: max. 6 minutes at 1 metre (100 ASA and above under 6 minutes)
- red: max. 0.5 - 6 minutes at 1 metre (depending on the film/developing fluid combination)
- cap between cap and bulb

Specific benefits:

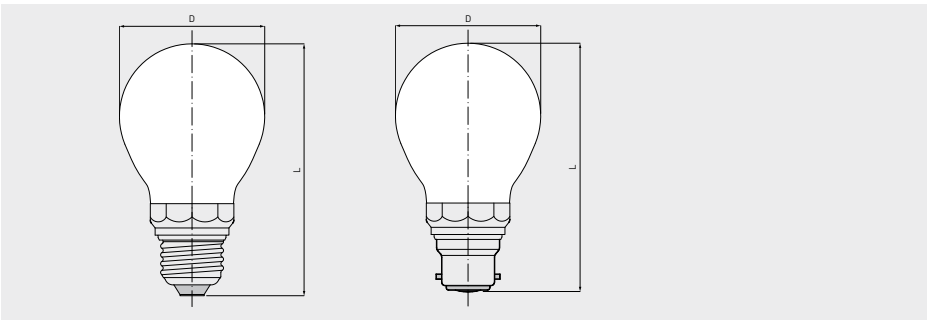
- no unwanted wavelengths
- no light emanation between cap and bulb

Areas of use:

- dark room lamp for B/W photography
  Yellow-green: photo emulsions on bromide and chlorine basis respectively and changeable contrast paper
  red: orthochromatic emulsions and changeable contrast paper



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Burning position	PU
77841421	230V 15W E27 A.60x104 Yellow/green dark	230	15		E27	61	107		8	1,000	any	
77841424	230V 15W B22d A.60x104 Yellow/green dark room	230	15		B22d	61	105.5		8	1,000	any	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Burning position	PU
77841422	230V 15W E27 A.60x104 red dark room	230	15		E27	61	107		7	1,000	any	
77841425	230V 15W B22d A.60x104 red dark room	230	15		B22d	61	105.5		7	1,000	any	

Photo lamps

Enlarger lamps (B/W photography)

Special features:
- corresponds to Philips Photocrescenta
- high-quality materials
- white internal coating

Specific benefits:
- conventional devices can still be used
- the specification of the lamps corresponds to the specification of these devices
- very even light emission
- high light yield

Areas of use:
- enlarger lamp for B/W photography

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Colour temperature K	Burning position	PU
77841412	230V 75W E27/27 A.60x104 coated	230	75		E27	61	107		1,100	100	2,800	any	
77841417	230V 100W E27/27 A.60x104 coated	230	100		E27	61	107		1,540	100	2,800	any	

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Colour temperature K	Burning position	PU
77841406	230V 150W E27/27 A.65x119 coated	230	150		E27	66	123		2,500	100	2,800	any	
77841419	230V 250W E27/27 A.65x119 coated	230	250		E27	66	123		6,500	3	3,000	any	

Photo lamps

Contents

Domestic lamps

There are a lot of "hidden" lamps in an average household. Lamps whose existence is only really noticed when they stop working. These are the small lamps that are so easy to forget: the lamps in the oven, in the fridge, in microwaves or cooker hoods.

They have no decorative function, are installed mainly in hidden positions and usually only provide light. But it is precisely these lamps that must fulfil very special demands: extreme temperatures, shocks, vibrations etc. are a real endurance test. And since the lamps must not be too conspicuous they are usually positioned in inaccessible places in the appliances. For this reason it is often difficult to change them. So domestic lamps must not only work economically but also very stable and durable.
DR FISCHER domestic lamps have been specially developed for heavy household demands. Our factory in Alpignano focuses on domestic lamps and has been manufacturing them successfully for many years.

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Oven lamps

Hot and sometimes greasy too: this is what the "workplace" of oven lamps looks like. They are used in ovens, stoves, grills, industrial furnaces and boiler plants. Temperatures typically rise to 300 °C, and lamps have to withstand these even in permanent operation.

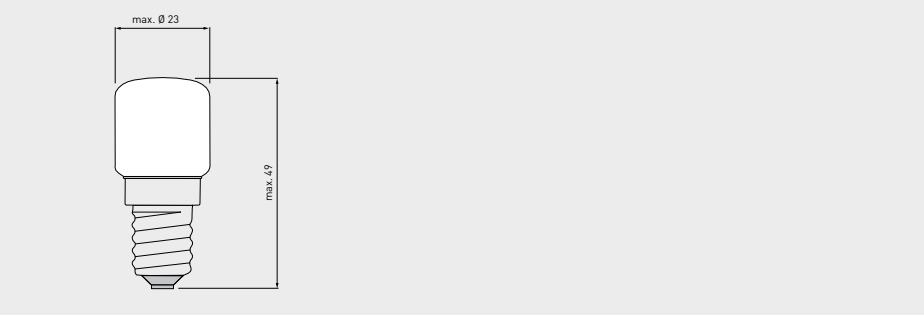
Only special, heat-resistant materials are suitable for lamps that are intended for use under such conditions. In addition, they must be constructed very compactly since there is only a limited amount of space available for a lamp.

Domestic
Oven lamps

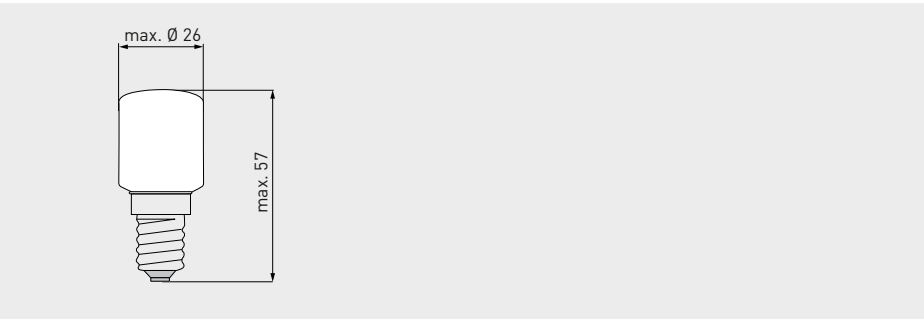
Special features:
- vacuum or gas-filled incandescent lamps with a clear bulb or an internal glazed/iced finish, only A6 bulbs
- manufactured with special, heat-resistant solder
- available in tubular (Ø 22.25 and 29 mm), spherical (Ø 45 mm) and all A60 versions with wound filament

Specific benefits:
- high temperature resistance
- specific oven illumination available in 15, 25 and 40 watts

Areas of use:
- high-temperature areas
- domestic and electric ovens
- grills



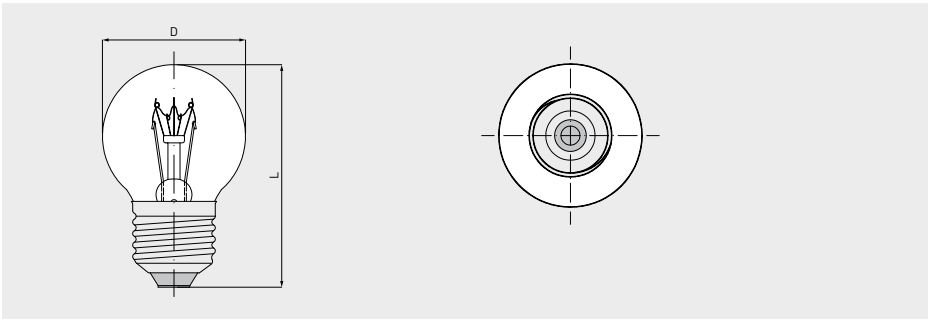
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4196235600	T22 15W 125-130V E14 CL OVEN	125-130	15		E14	23	49		90	1,000		n.a.	
4196244400	T22 15W 230-240V E14 CL OVEN	230-240	15		E14	23	49		90	1,000		n.a.	
4196245700	T22 15W 240-250V E14 CL OVEN	240-250	15		E14	23	49		90	1,000		n.a.	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4198235600	T25 25W 125-130V E14 CL OVEN	125-130	25		E14	26	57		172	1,000		n.a.	
4198244400	T25 25W 230-240V E14 CL OVEN	230-240	25		E14	26	57		172	1,000		n.a.	
4198245700	T25 25W 240-250V E14 CL OVEN	240-250	25		E14	26	57		172	1,000		n.a.	

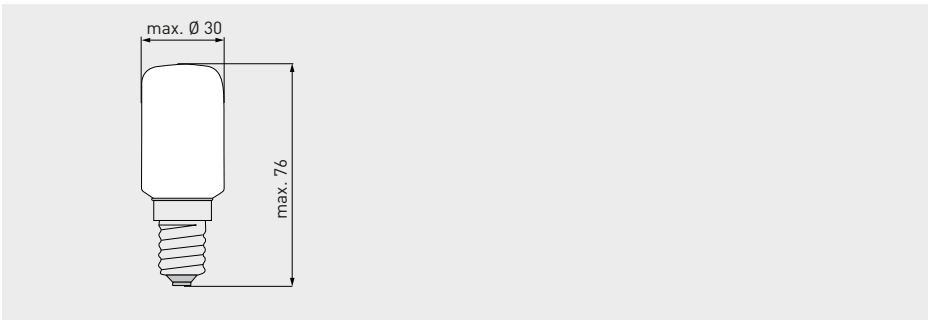
Domestic
Oven lamps

For special features, specific benefits and areas of use see page 151



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845304	230V 40W E27 300°C OVEN	230	40		E27	45	70	Centre Bulb	370	1,000			

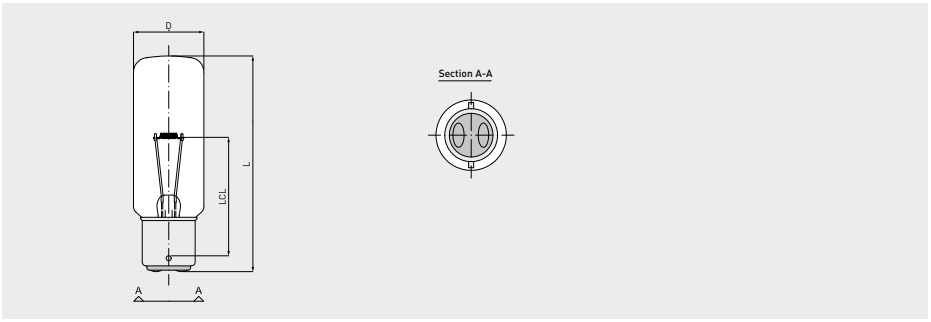
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4198544200	T22 10W 230V E14 CL	230	10		E14	23	49		35	1,000		n.a.	



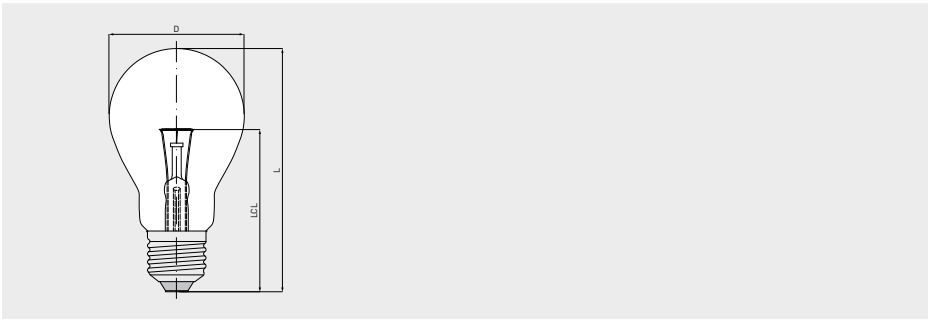
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4103044400	T29 40W 230-240V E14 CL OVEN	230-240	40		E14	30	76		400	1,000		n.a.	

Domestic
Oven lamps

For special features, specific benefits and areas of use see page 151



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845303	24V 60W B22d/22 300°C OVEN	24	60		B22d/22	30	90	49	750	500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845312	24V 60W E27 300°C OVEN	24	60		E27	60	108	75	1,000	500			

Refrigerator lamps

Domestic lamps for use in refrigerators and freezers must fulfil three conditions: long life, high light yield and cold resistance. This means that strengthened filaments are necessary for these lamps.

Refrigerator lamps must also be robust as regards frequent load change (on/off). No other lamp in the entire household is switched on and off as frequently as the refrigerator light.

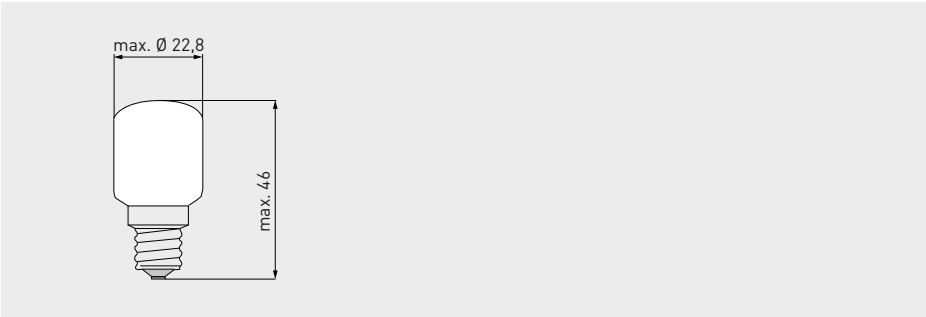
Domestic

For refrigerators and freezers

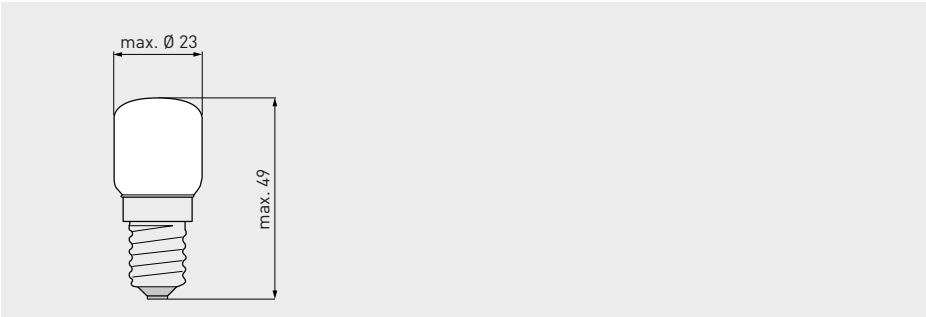
Special features:
- suitable for refrigerators and general lighting
- high luminous power
- universal burning position

Specific benefits:
- bright light quality, making it especially suitable for refrigerators

Areas of use:
- refrigerators
- freezers



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4109635600	T22 10 W 120 V E12	120	10		E12	23	46		61	1,000		n.a.	

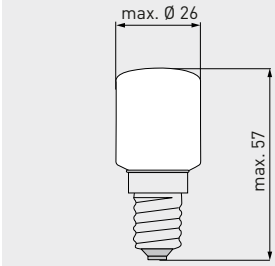


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4109944400	T22 12W 230-240V E14 CL REFR	230-240	12		E14	23	49		70	1,000		n.a.	

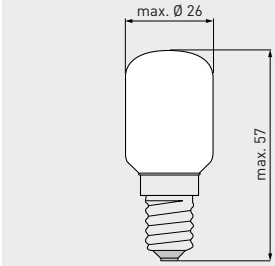
Domestic

For refrigerators and freezers

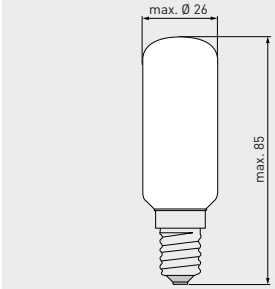
For special features, specific benefits and areas of use see page 155



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4100844400	T25 10W 230-240V E14 CL	230-240	10		E14	26	57		35	1,000		n.a.	
4197444400	T25 12W 230-240V E14	230-240	12		E14	26	57		70	1,000		n.a.	
4107435600	T25 12W 125-130V E14	125-130	12		E14	26	57		70	1,000		n.a.	
4197735600	T25 15W 125-130V E14 CL REFR	125-130	15		E14	26	57		110	1,000		n.a.	
4197744400	T25 15W 230-240V E14 CL REFR	230-240	15		E14	26	57		110	1,000		n.a.	
4107744400	T25 15W 230-240V E14 CL REFR	230-240	15		E14	26	57		110	1,000		n.a.	
4199735600	T25 25W 125-130V E14 CL REFR	125-130	25		E14	26	57		172	1,000		n.a.	
4199744400	T25 25W 230-240V E14 CL REFR	230-240	25		E14	26	57		172	1,000		n.a.	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
41 07144400	T25 25W 230-240V E14 DB REFR	230-240	25		E14	26	57		146	1,000		n.a.	
4107244400	T25 15W 230-240V E14 DB REFR	230-240	15		E14	26	57		94	1,000		n.a.	

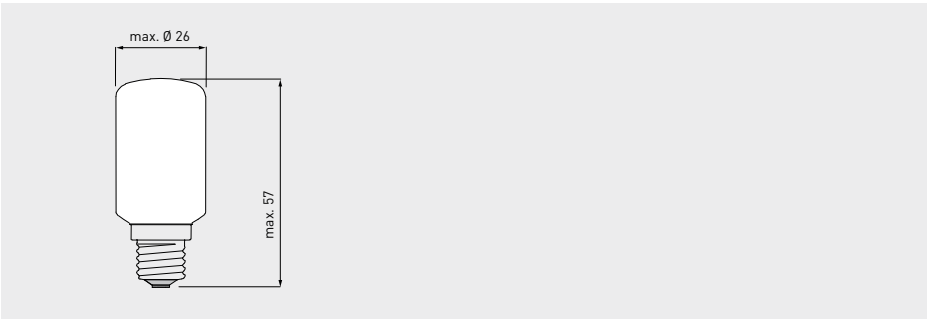


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4105135600	T25L 25W H.E. 125-130V E14 CL	125-130	25		E14	26	100		255	1,000		n.a.	
4105144400	T25L 25W H.E. 230-240V E14 CL	230-240	25		E14	26	100		217	1,000		n.a.	

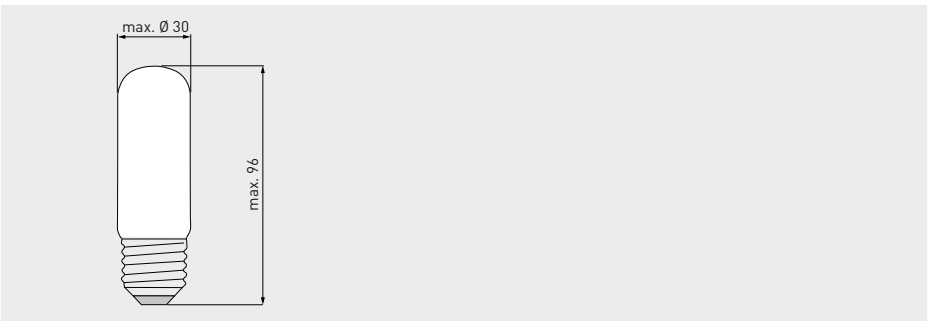
Domestic

For refrigerators and freezers

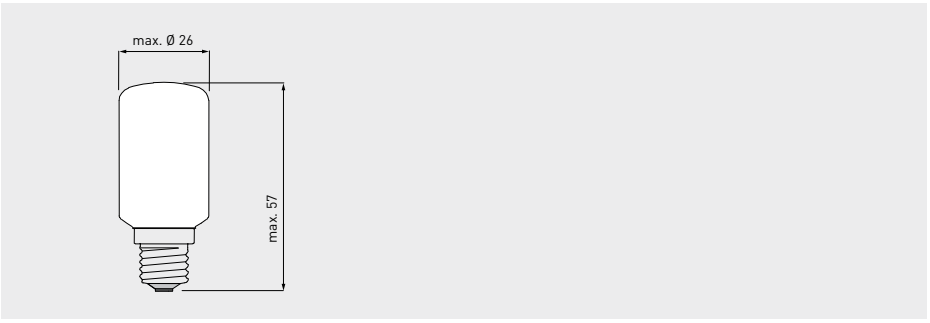
For special features, specific benefits and areas of use see page 155



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4105435600	T25L 40W 125-130V E14 DA.	125-130	40		E14	26	100		225	1,000		n.a.	
4105444400	T25L 40W E14 230-240V DA	230-240	40		E14	26	100		210	1,000		n.a.	
4105535600	T25L 25W 125-130V E14 DA	125-130	25		E14	26	100		127	1,000		n.a.	
4105544400	T25L 25W 230-240V E14 DA.	230-240	25		E14	26	100		108	1,000		n.a.	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4190444200	T29L 40W 230V E27 CL	230	40		E27	30	96		280	1,000		n.a.	
4190435600	T29L 40W 125-130V E27 CL	125-130	40		E27	30	96		280	1,000		n.a.	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4108144400	T25 25W 230/240V E14 FR	230-240	25		E14	26	57		172	1,000		n.a.	

Lamps for microwaves

Because of the high transmitting power of the magnetrons, currents of more than 20 amps can flow in metal parts in the oven chamber. Thin metal layers such as aluminium foil and dishes with metal decorations can therefore melt in a microwave oven.

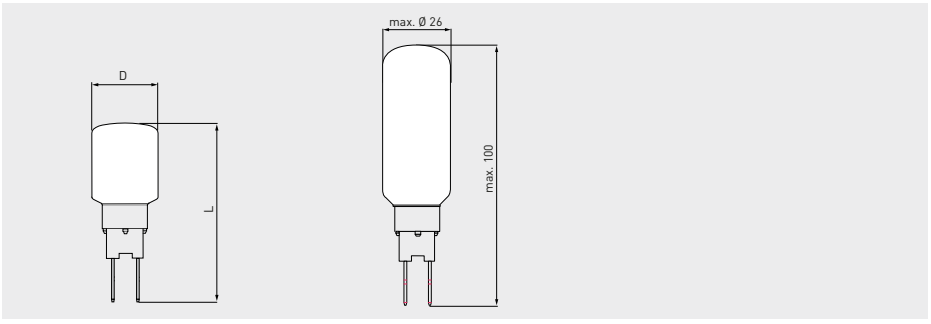
But the filament in a lamp is there precisely to become hot. And the lamp glass is also designed to withstand heat well.
So lamps for microwaves do not have to withstand any serious burdens. They must above all be small and light intensive.

Domestic
For microwaves

Special features:
- tube-shaped vacuum incandescent lamps with strengthened single / double-filament filament and a clear bulb
- T-CLICK design
- universal burning position

Specific benefits:
- easy to assemble
- vibration-resistant due to strengthened filament

Areas of use:
- microwave appliances



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4101144419	T25 15W 230-240V	230-240	15		T-CL	26	70.5	110	1,000				200
4101244412	T25 25W 230-240V	230-240	25		T-CL	26	70.5	172	1,000				200
4101944419	T25 40W 230-240V	230-240	40		T-CL	26	100	420	1,000				150

T25 lamps can also be produced with these special caps:

Lamps for cooker hoods

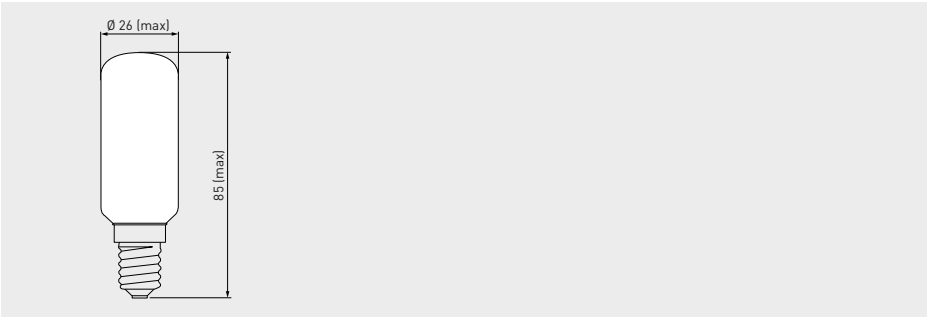
These lamps have to withstand strong vibrations. In addition to steam and heat it is the heaviest burden lamps for cooker hoods have to withstand. Lamps that are used in traffic are subjected to stronger vibrations.
But the constant vibration of the cooker hood that the lamps have to withstand is a real challenge. And being able to provide the highest quality products so consistently does make us a little pride.

Domestic
For cooker hoods

Special features:
- gas-filled incandescent lamps with a clear bulb

Specific benefits:
- shock-resistant
- functional safety
- long, disturbance-free life

Areas of use:
- cooker hoods



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4129035600	T25L 40W 125-130V E14 CL C.H.	125-130	40		E14	26	100		450	1,000		n.a.	
4129044400	T25L 40W 230-240V E14 CL C.H.	230-240	40		E14	26	100		420	1,000		n.a.	
4106035600	T25L 40W 125-130V E12 CL C.H.	125-130	40		E12	26	100		420	1,000		n.a.	

Hidden light

There are many lamps that you only notice when they no longer work. Sewing machine lamps are an example. They are there, inconspicuously illuminating what they are supposed to. They are not essential and it is really not the job of a sewing machine to provide light. But when such a little lamp does go out it becomes clear how important it really is.
It is similar with the small lamps in piano and reading lights. They do not impose themselves but illuminate discreetly wherever they are needed.

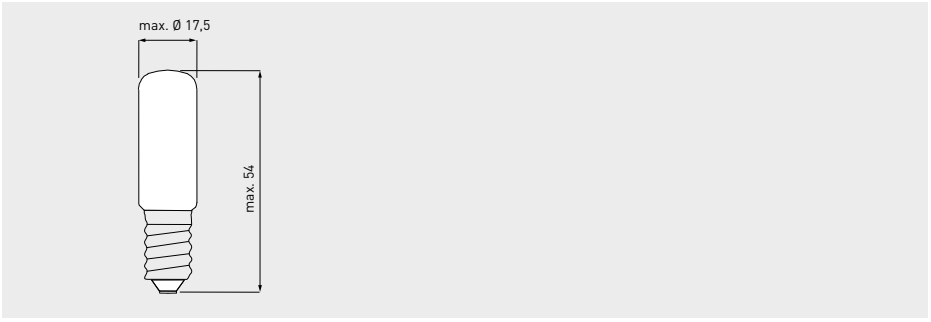
Domestic

For other household equipment

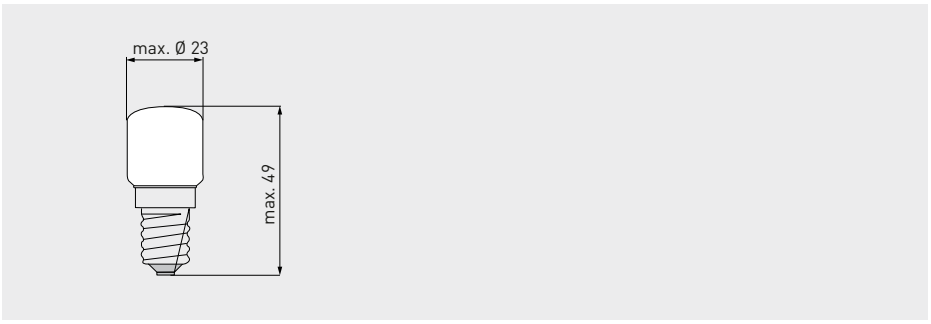
Special features:
- vacuum or gas-filled incandescent lamps with a clear bulb or an internal glazed/iced finish,
- high luminous power

Specific benefits:
- easy to assemble
- long, disturbance-free life
- shock-resistant

Areas of use:
- other household appliances
- sewing machines
- piano lighting



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4151144400	T17 7W E14 230-240V CL	230-240	7		E14	17.5	54		21	1,000		n.a.	
4151445700	T17 10W E14 240-250V CL	240-250	10		E14	17.5	54		37	1,000		n.a.	
4152844400	T17 15W 230-240V E14 CL	230-240	15		E14	17.5	54		97	1,000		n.a.	
4153244200	T17 15W 230V B15d CL	230	15		BA15d	17.5	54		74	1,000		n.a.	

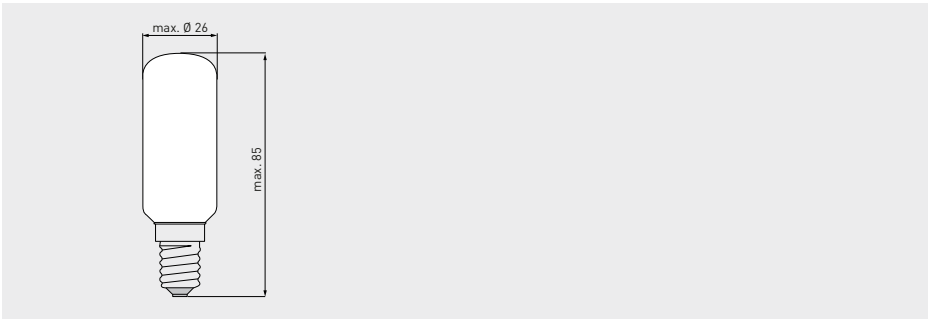


Article no.	Description	Voltage	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction))	Burning position	PU
4195444400	T22 20W 230-240V E14 CL SM	230-240	20		E14	23	49		120	1,000		n.a.	

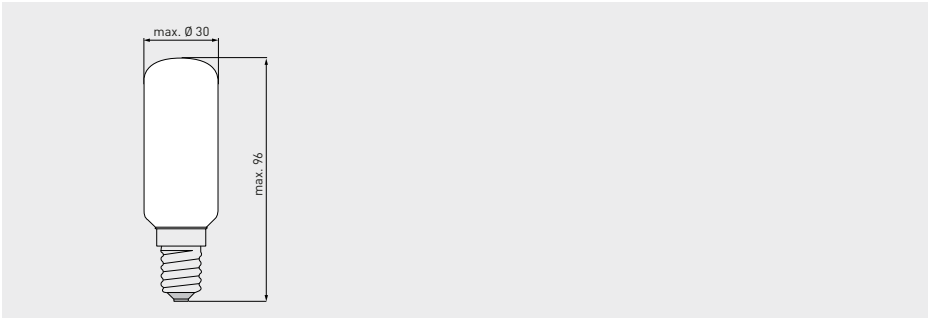
Domestic
For other household equipment

For special features, specific benefits and areas of use see page 163

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4196444400	T25 15W 230/240V E14 FR	230-240	15		E14	26	57		110	1,000		n.a.	
4196944400	T25 25W 230/240V E14 FR	230-240	25		E14	26	57		172	1,000		n.a.	
4198944200	T25 15W 230V B15d CL	230	15		BA15d	26	52		103	1,000		n.a.	
4199144200	T25 25W 230V B15d CL	230	25		BA15d	26	52		160	1,000		n.a.	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4128044400	T25L 40W 230-240V E14 CL	230-240	40		E14	26	85		217	1,000		n.a.	
4127244400	T25L 25W 230-240V E14 CL	230-240	25		E14	26	85		420	1,000		n.a.	

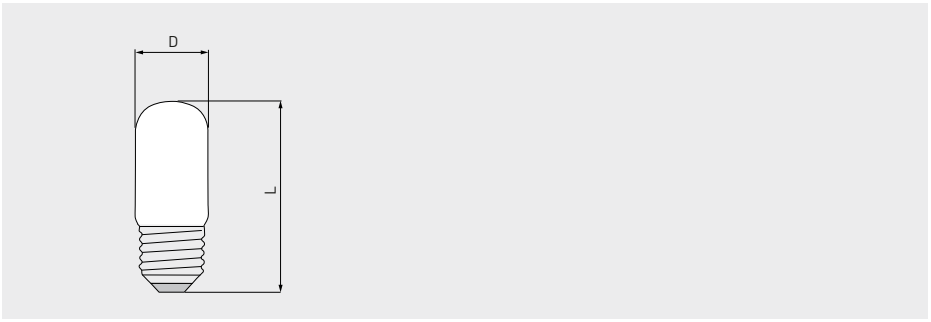


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
4184944200	T29 25W 230V E14 CL	230	25		E14	30	96		200	1,000		n.a.	
4190544400	T29 40W 230V E14 CL	230	40		E14	30	96		385	1,000		n.a.	
4130143400	T29L 60W 230V E14 CL	230	60		E14	30	96		680	1,000		n.a.	

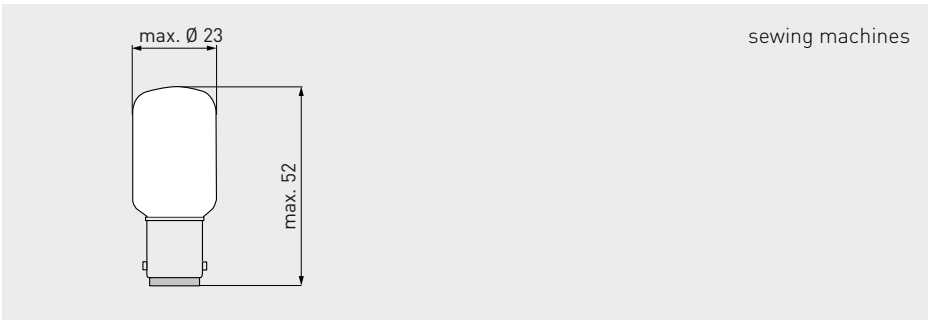
Domestic

For other household equipment

For special features, specific benefits and areas of use see page 163



Article no.	Description	Voltage	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
1526545500	T29M 15W 240V E27 CL	240	15		E27	30	61		78	1,000		n.a.	
4350541700	T29M 7.5W 210-240V E27 WH	210-240	7.5		E27	30	73		16	5,000		n.a.	
4350641700	T29M 7.5W 210-240V E14 WH	210-240	7.5		E14	30	76		21	5,000		n.a.	



sewing machines

Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
1131844400	T22X51 15W 230-240V B15d CL SM	230-240	15		BA15d	23	52		82	1,000		n.a.	
1132044420	T22X51 25W 230-240V B15d CL SM	230-240	25		BA15d	23	52		120	1,000		n.a.	

Contents

Bringing light to darkness

Special lamps are used in the most varied of places and for the most varied of purposes. They are sometimes also very special lamps that must fulfil very precise conditions. This could be a necessity for very strong luminous power that as discharge lamps fulfil. Or the necessity of marking escape routes permanently and reliably.
But maybe it is the case that goods of all kinds must be given the right light. Whether it is fashion articles where the right colour reproduction is crucial or food that must not be heated but must still look good.

The companies of the DR FISCHER Group develop and manufacture lamp solutions that fulfil all these purposes.

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Gas discharge lamps

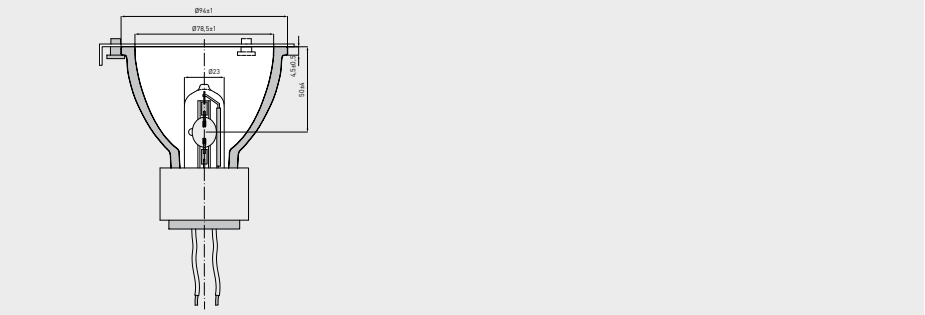
Halogen metal vapour lamps have a high colour reproduction index and a high light yield (up to 117 lm/W with good colour reproduction, up to 110 lm/W with very good colour reproduction). Halogen metal vapour lamps are extremely efficient and convert more than 30% of the total input power into light. A further advantage is their very long life. Our halogen metal vapour lamps are used to provide daylight-standard lighting with beam lights when long duty cycles, high luminous power and the smallest possible build-up of heat are required. More and more halogen metal vapour lamps are being used to light architecture, halls and stadiums and also for street lights. Lighting for film shoots is another area where halogen metal vapour lamps are used.
Rescue services often use lights with halogen metal vapour lamps that have a compact construction and a high level of brightness.

Gas discharge lamps
Halogen metal vapour lamps

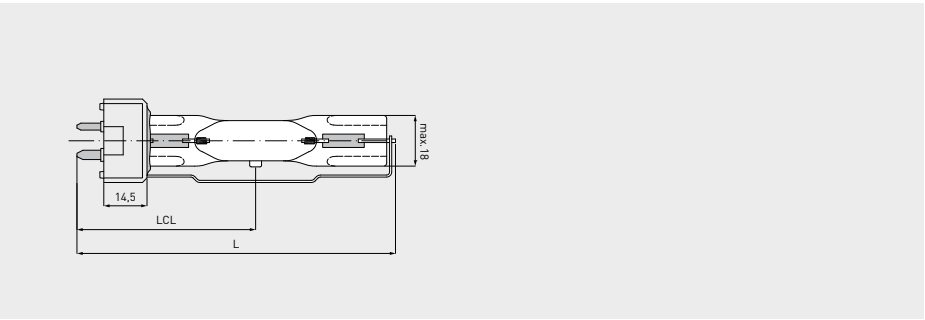
Special features:
- only operates with ballasts
- spotlights for tanning purposes may only be used in appliances that are intended for them
- halogen metal vapour lamps for fibre optics systems

Specific benefits:
- high radiancy in special spectral ranges
- materials used are highly temperature-resistant
- lamps easy to change without the necessity for readjustment

Areas of use:
- inside lighting
- spas and swimming pools
- solaria/tanning

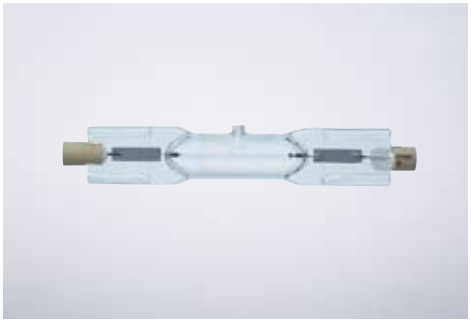


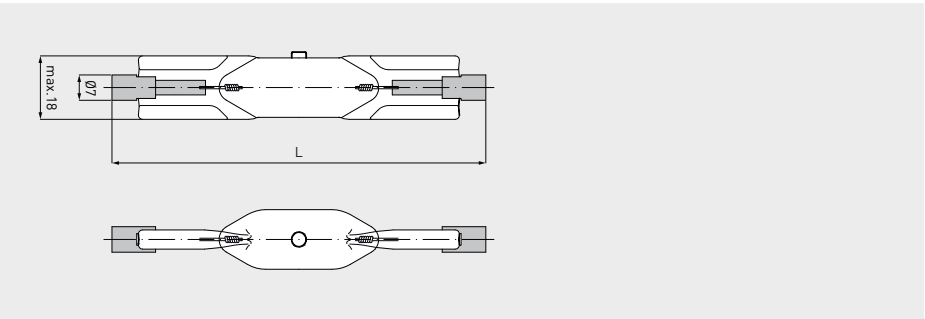
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00848703	light module 150W 3000K	230*	150		Special		110±7		14,000	10,000		horizontal	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00848213	300/500W SE Gy 9.5	230*	300/500	3.08	GY9.5	18	110	ca. 60		500			

* operates with ballast





Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00848214	400W DE R7s	230*	400	3.08	GY9.5	18	106			500			

When brightness is required

One important product group is projection lamps.
These lamps, for projectors, measuring devices, microscopes, optical devices and other special applications have a high luminous flux and high light density.
On account of the heavy burdens and because the most important aspects of these lamps are the high luminous flux and high light density the life of these lamps is limited.
So that the lamps perform at maximum capacity during their lives, they are manufactured with high precision and above all adapted exactly to the purpose they are intended for.

Projection and beam lamps

For optics and optoelectronics

Special features:

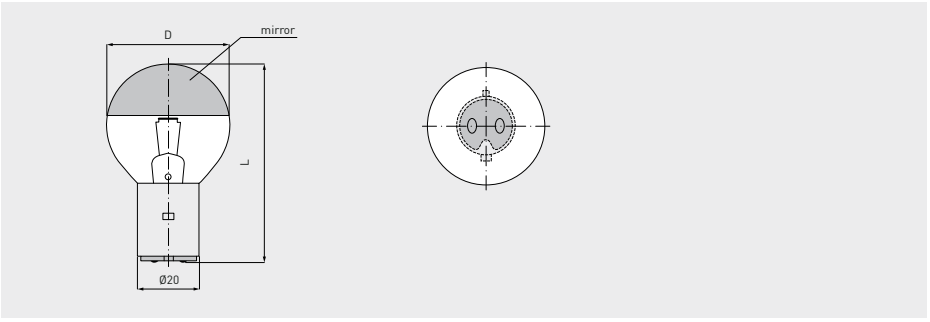
- precision of manufacture
- minimal tolerances in the positioning of the filaments
- can be adapted exactly to the intended purpose of use

Specific benefits:

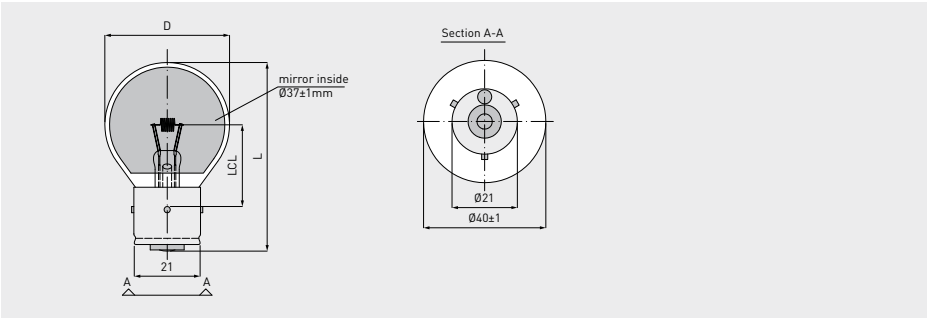
- high light yield
- corrosion-proof nickel-plated cap

Areas of use:

- projectors
- talking film
- measuring devices
- microscopes
- light barriers
- special applications



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00833317	12V 30W BA20d	12	30		BA20d	41	65		400	600			

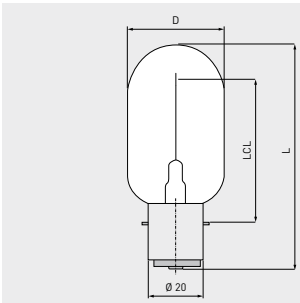


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00833407	12V 70W Ba21s3 SM	12	70		Ba21s3	41	61	26.2	1,200	25			

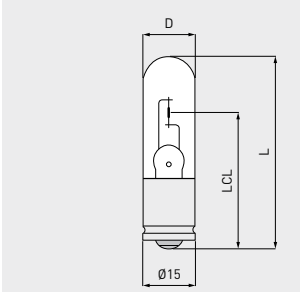
Projection and beam lamps

For optics and optoelectronics

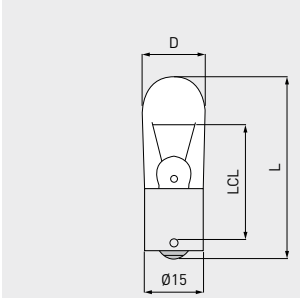
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843423	6V 30W BA20d without cable	6	30		BA20d	35	86	51	400	400			



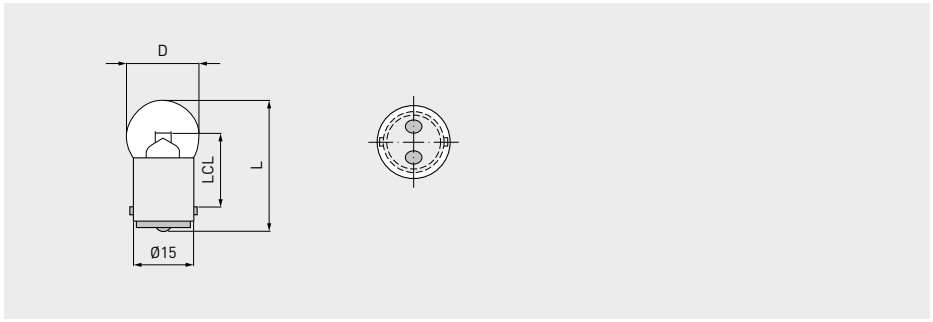
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843004	4V 0.75A SX15s	4	3	0.75	SX15s/19	16	55	39.5	17	1,500			



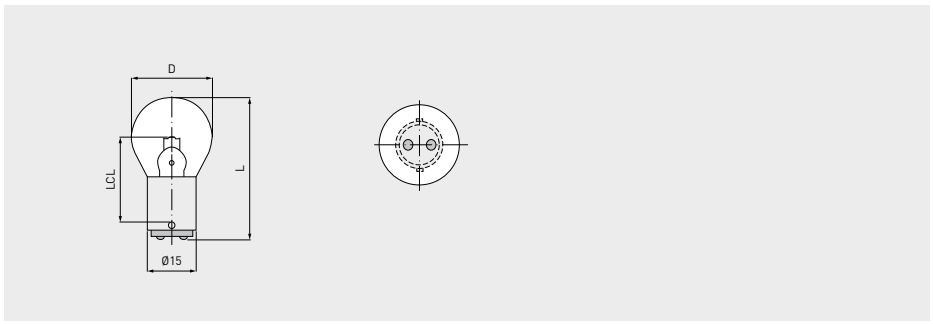
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843007	6V 5W BA15s 1500h	6	5		BA15s/19	16	46	29.5	40	1,500			

Projection and beam lamps
For optics and optoelectronics

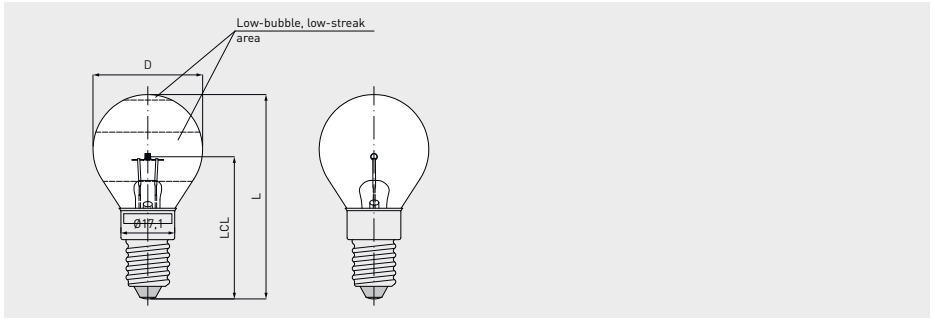
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00843010	6V 5W BA15d/19	6	5		Ba15d/19	18	35	18	30	1,500			
00843012	6V 5W BA15d	6	5		BA15d	25	45	30.5	40	800			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00843011	6V 5W BA15d	6	5		BA15d	25	45	26.8	35	5,000			



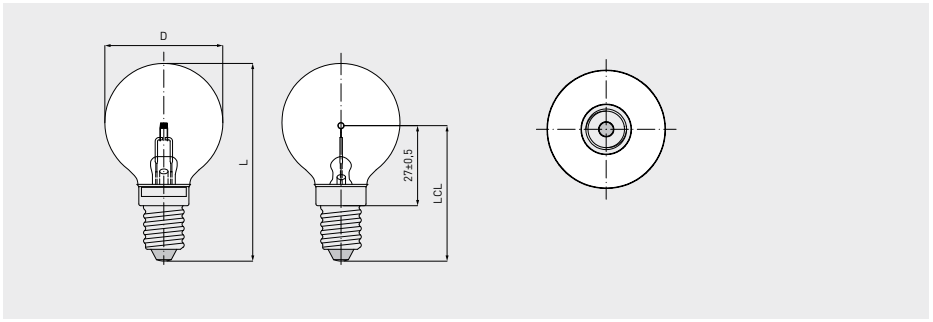
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00843364	6V 4.35A E14 nickel-plated	6		4.35	E14	35	65	8*	480	100			
00843016	6V 5A E14	6		5	E14	35	65	45	385	600			

* distance between filament and bulb dome

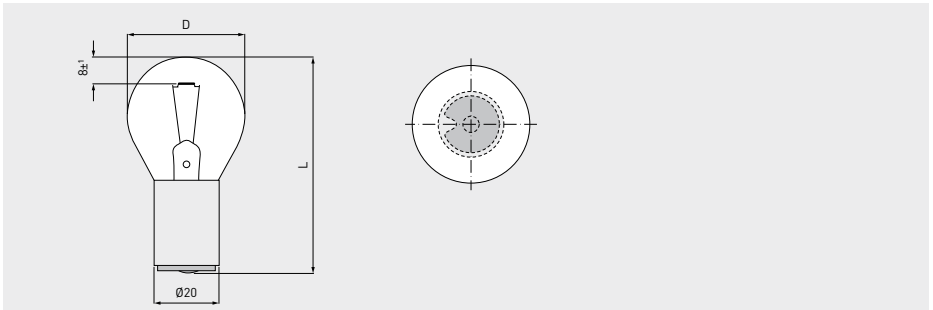
Projection and beam lamps

For optics and optoelectronics

For special features, specific benefits and areas of use see page 171

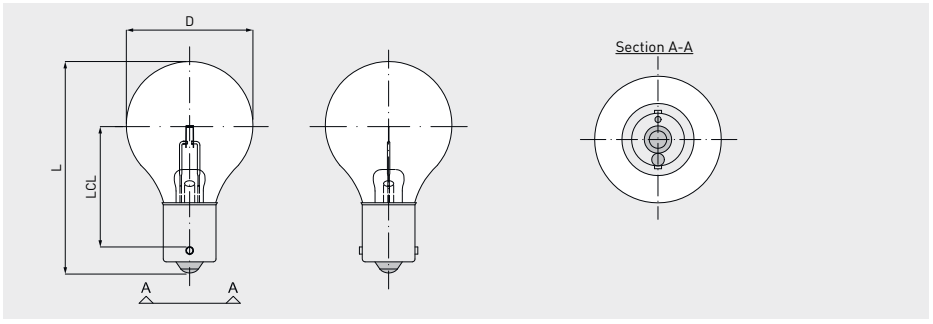


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843018	6V 30W E14/25x17 40x67 clear	6	30		E14	41	67	46.5	420	800			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843029	6V 30W BA20d 35x67 clear	6	30		Ba20d/26	35	67	9*	450	300		h105	
00843030	6V 30W BA20d 35x60 clear	6	30		Ba20d/23	35	60	9*	400	300		h105	
00843031	6V 30W S20s	6	30		S20s/28	35	65	8*	580	100			
00843165	12V 50W BA20d	12	50		BA20d	35	69	39.5	1,200	50			
00843057	12V 60W BA20d	12	60		BA20d	35	64.2	9*	1,200	100			

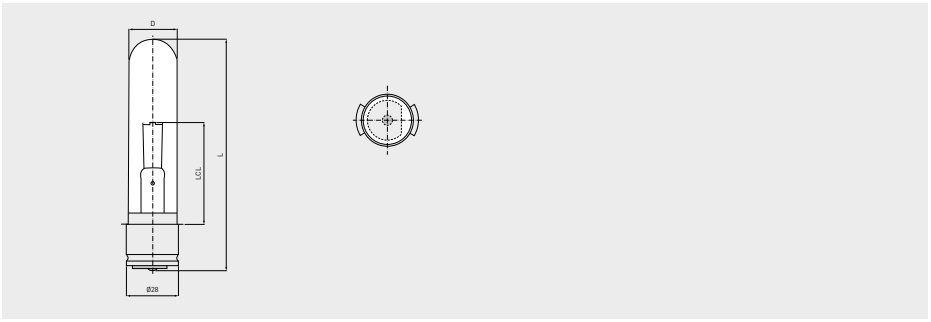
* distance between filament and bulb dome



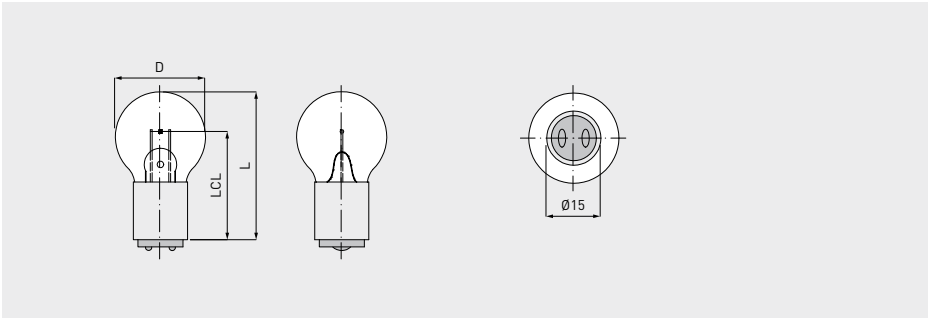
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843042	12V 5A Ba15s	12		5	BA15s	36	60	34.5	1,500	100			

Projection and beam lamps
For optics and optoelectronics

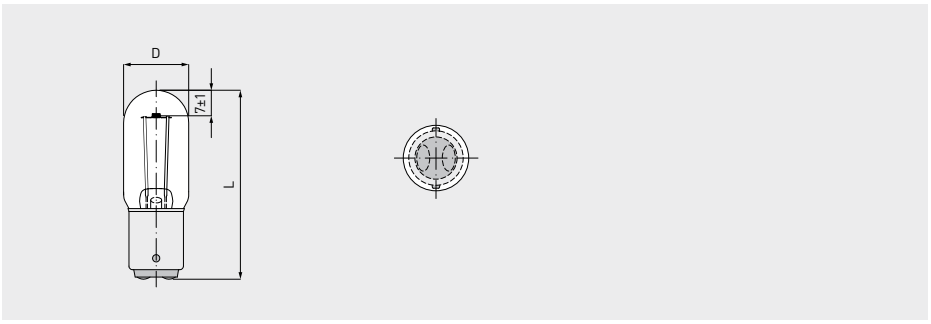
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843058	12V 100W P28s	12	100		P28s/24	26	125	56.1	2,750	100			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843065	6V 5W S15d	6	5		S15d	26	42	31	40	1,500			



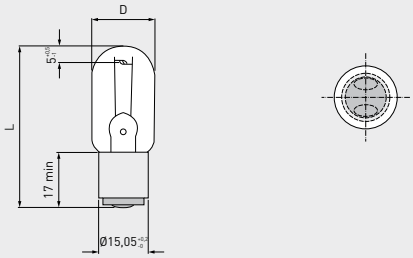
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843413	6V 15W BA15d/19 18x60 clear Longlife	6	15		BA15d/19	18	57	7*	150	2,000			

* distance between filament and bulb dome

Projection and beam lamps

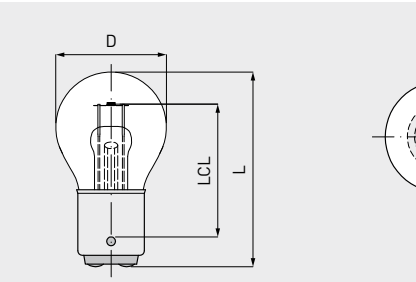
For optics and optoelectronics

For special features, specific benefits and areas of use see page 171

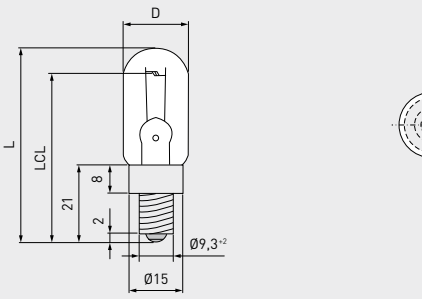


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843084	6V 20W S15d/19 with ring flat core-filament	6	20		S15d/19	19	50	5*	200	100			

* distance between filament and bulb dome



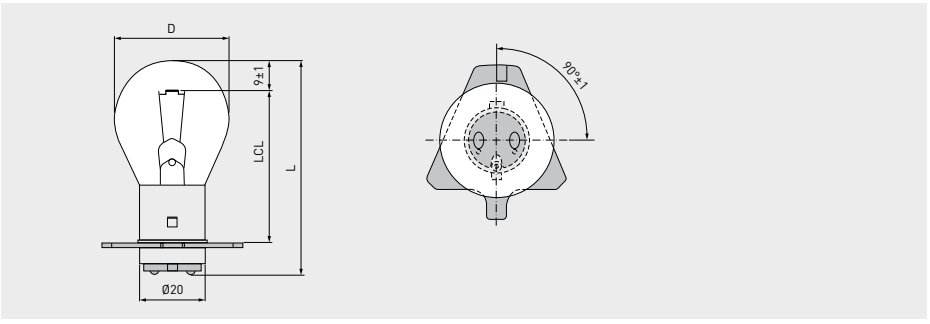
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843093	6V 10W BA15d	6	10		BA15d/19	25	44	30	120	200			
E0843374	6V 10W BA15s transversal	6	10		BA15s	25	44	27	90	600			
00843068	12V 10W BA15s	12	10		BA15s	25	43	22.5	110	5,000			
00843434	12V 10W BA15s/19 18x35 clear	12	10		BA15s/19	18	35	20	90	5,000			



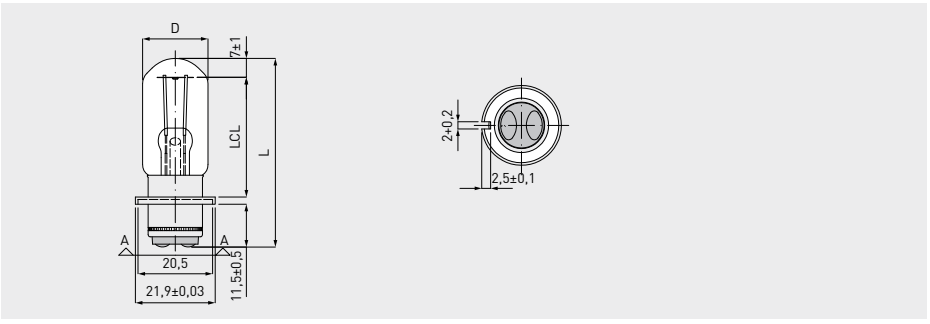
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843103	6V 15W E10/19x13 T.18x55 clear	6	15		E10	18.5	55	48	200	500			

Projection and beam lamps
For optics and optoelectronics

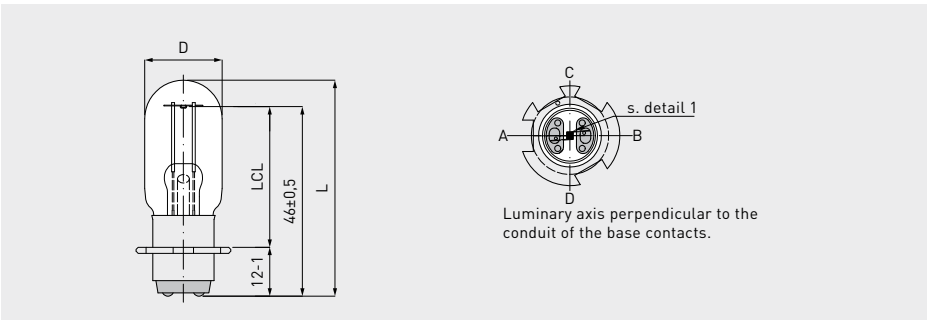
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843110	6V 30W P47d	6	30		Ba20d/26 w. ring	35	64.5	44	580	100			
00843112	6V 30W BA20S with ring P42	6	30		BA20s/26 w. ring	35	65	46.3	580	100			
00843307	6V 30W P47s	6	30		S20s/28 w. ring	35	65	49	580	100			
00843359	6V 30W Ba20s with ring P43	6	30		Ba20s/23 w. ring	35	60	44	580	100			
00843111	6V 50W P47d	6	50		Ba20d/26 w. ring	35	64.25	43.8	850	300			
00843078	12V 35W P47d	12	35		Ba20d/26 w. ring	35	67	45	560	100			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843120	6V 15W S15d with ring (P15d)	6	15		S15d/19 w.ring	18	52	33	180	100			



Luminary axis perpendicular to the conduit of the base contacts.

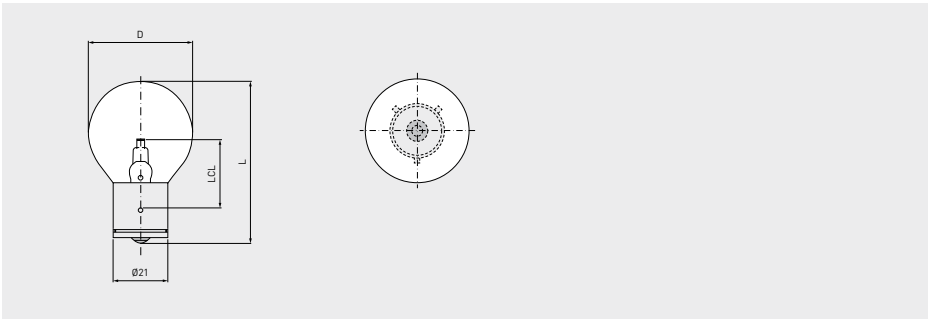
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843121	6V 15W P24d flat-core filament	6	15	2.5	S15d/19 w.ring	19	53	34.5	180	100			
00843350	6V 15W P24d round-core filament	6	15		S15d/19 w.ring	19	53	33	140	1,000			

Projection and beam lamps

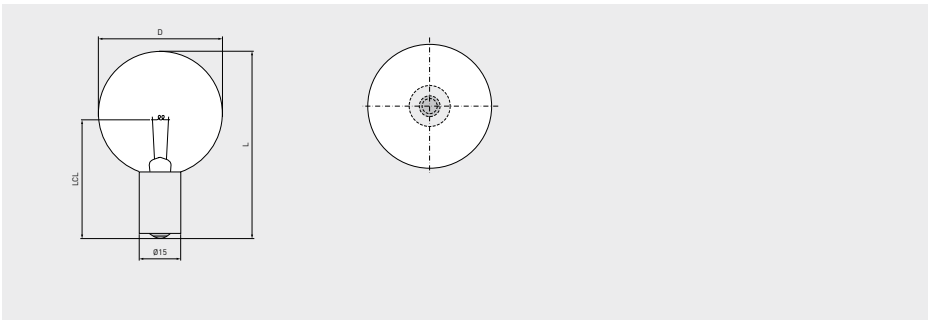
For optics and optoelectronics

For special features, specific benefits and areas of use see page 171

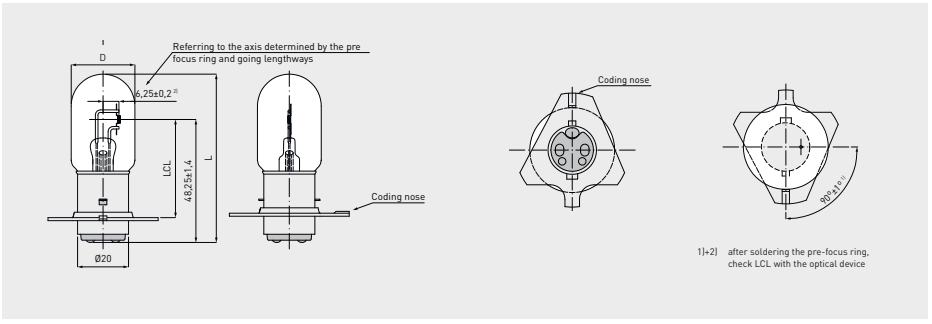
00843142 00843432



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00843142	6V 5A BA21s	6	30	5	Ba21s-3	40	62	26.2	520	400			
00843432	6V 5A Ba21s-3	6	30	5	Ba21 s-3	35	57	35.5	460	300			
00843406	12V 5A BA21s-3	12	60	5	BA21s-3	40	62	26.2	1,300	100			



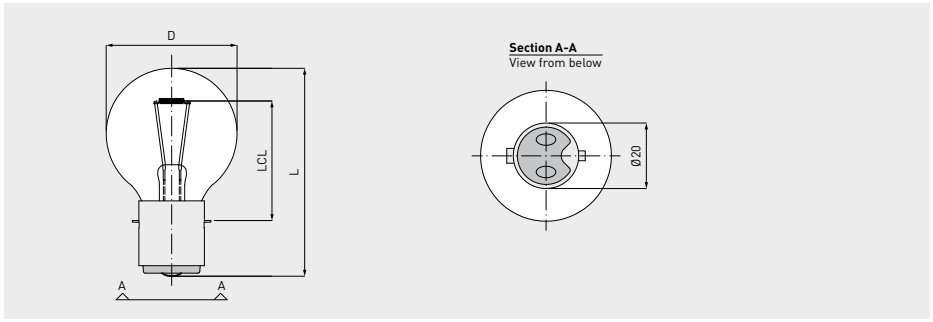
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843146	12V 100W H20s	12	100		H20s	60	69	45.5	1,700	100			



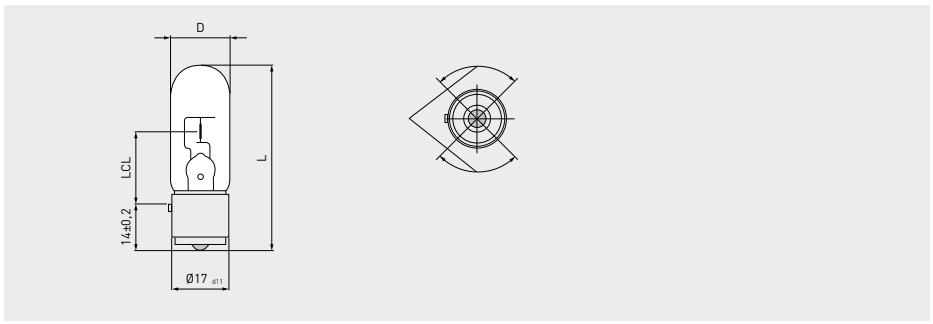
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00843222	6V 25W BA20d with ring	6	25	4.17	Ba20d/23 with ring	25	67	48.25	370	75			

Projection and beam lamps
For optics and optoelectronics

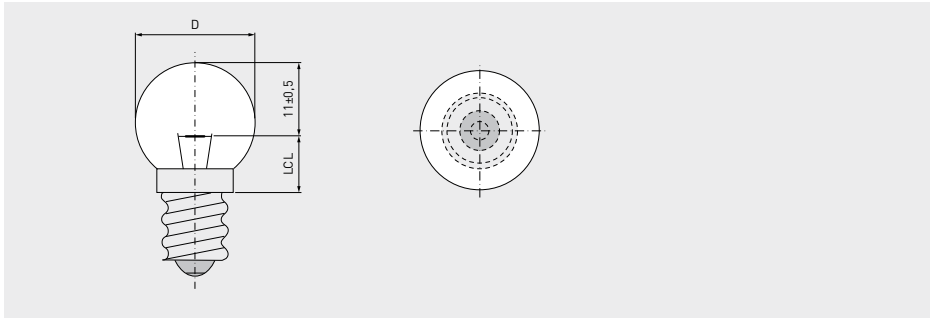
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00843274	12V 60W BA20d	12	60		BA20d	40	62	36.5	800	200			
00843170	12V 100W BA20d	12	100		BA20d	50	74	47	1,900	50			
00843271	12V 5A BA20d	12		5	BA20d	40	62	36.5	800	200			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00843278	12V 25W S15s with ring	12	25		Sx15s/19 with ring	18	56.5	22	240	500			

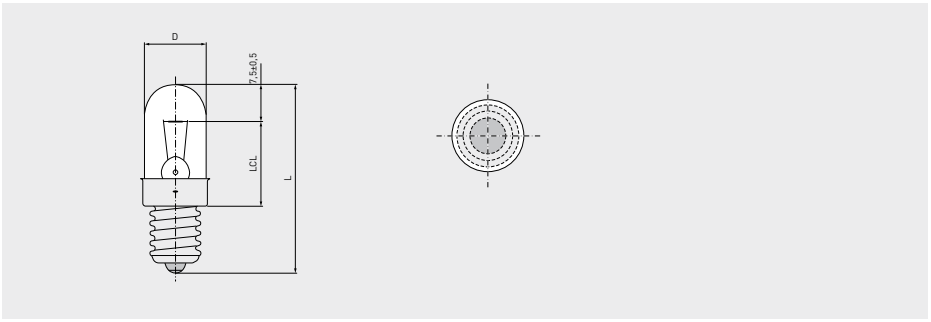


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
E0843310	25V 1A E10	25		1	E10	18		8.5	40	5,000			

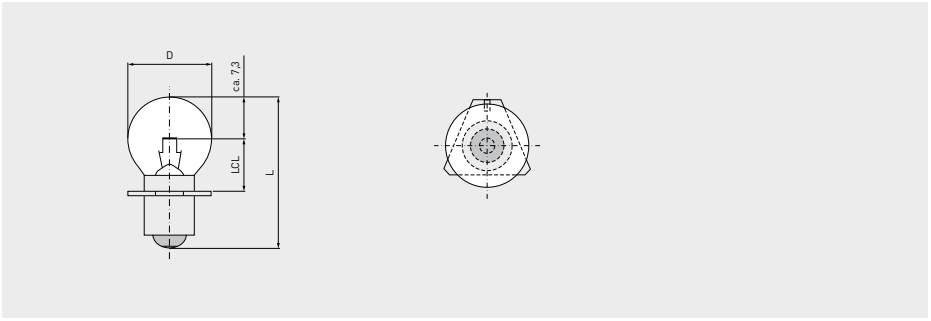
Projection and beam lamps

For optics and optoelectronics

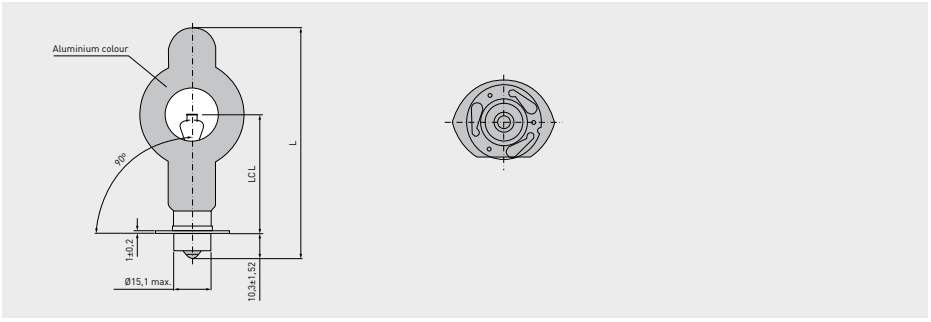
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
E0843316	6.3V 5W E10	6.3	5		E10/19x13	12.5	38	17	35	800			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00843325	6V 5W PX16s	6	5		S9s/13 with ring	15.5	27	9.5					
00843337	6V 5W PX16s	6	5		S9s/13 with ring	15.5	28	11	45	100		h105	



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00843365	8V 50W P30s	8	50		SX15s/19 with ring		93	48					

Projection and beam lamps
For optics and optoelectronics

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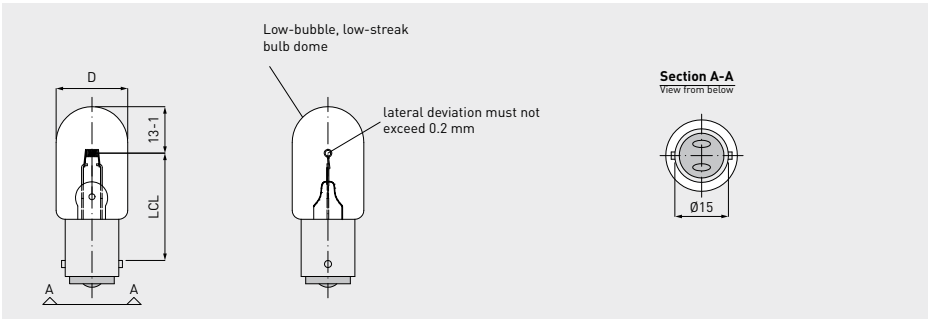
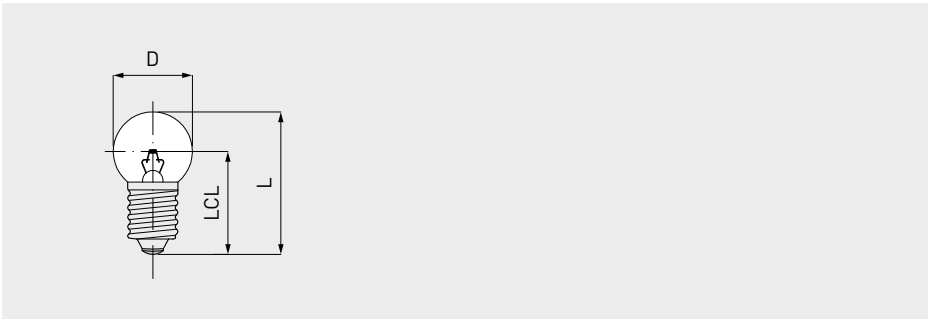
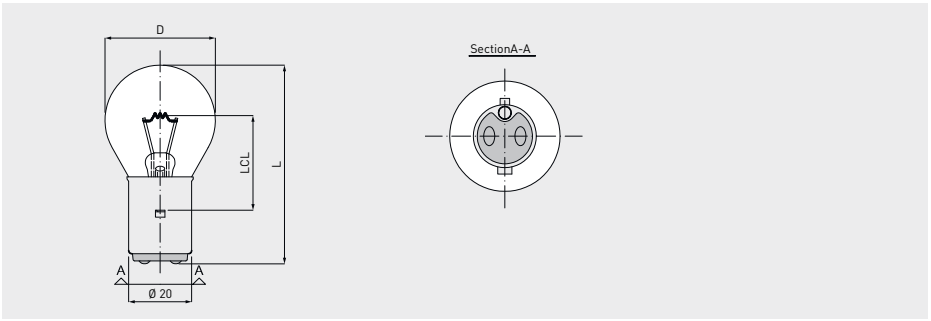


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843370	6V 6W BA15d 20mm tube	6	6		BA15d	20		30.2	65	600			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843372	6V 6W E10 GK15 round	6	6		E10	15	27	15	25				

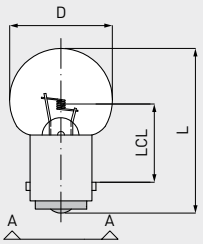


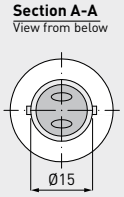
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00163500	6V 35W BA20s	6	35		BA20s	35	64	30	580	100			
00843377	15V 60W BA20d	15	60		BA20d	35	67	30	1,200	100			

Projection and beam lamps

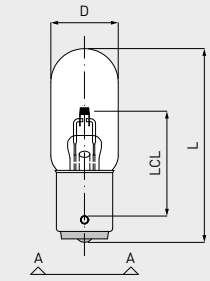
For optics and optoelectronics

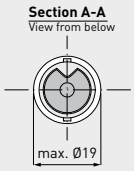
For special features, specific benefits and areas of use see page 171





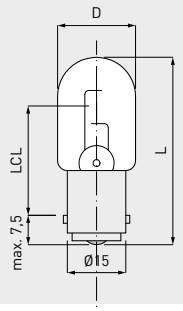
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843383	6V 7W BA15d/19	6	7		BA15d/19	25	40	19	70	2,000			

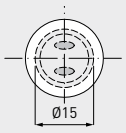




Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843079	6V 15W BA15d	6	15		BA15d/19	19	52	7*	140	1,000			
E0843341	6V 25W BA15s	6	25		BA15s	19	53	27	420	250			
00843403	6V 5A BA15s	6	30	5	Ba15s/19	19	55	28	540	50			
00843106	25V 1.0A BA15s	25		1	BA15s	19.5	50	24	450				

* distance between filament and bulb dome





Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843410	12V 15W BA15d	12	15		Ba15d/19	20	48	28	160	2,000			
00843416	12V 15W BA15d	12	15		BA15d	16	48	28	160	2,000			

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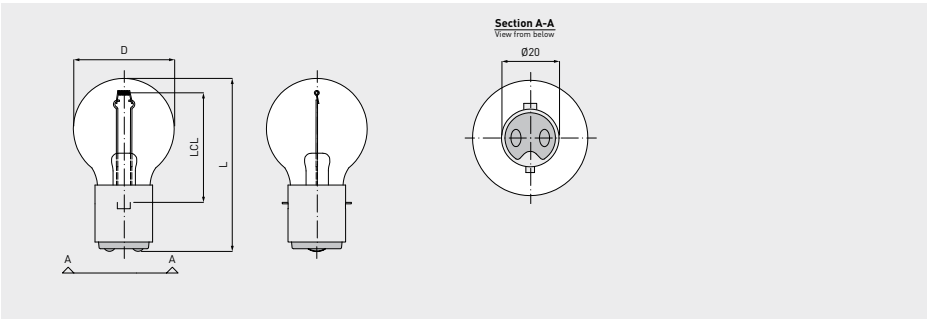
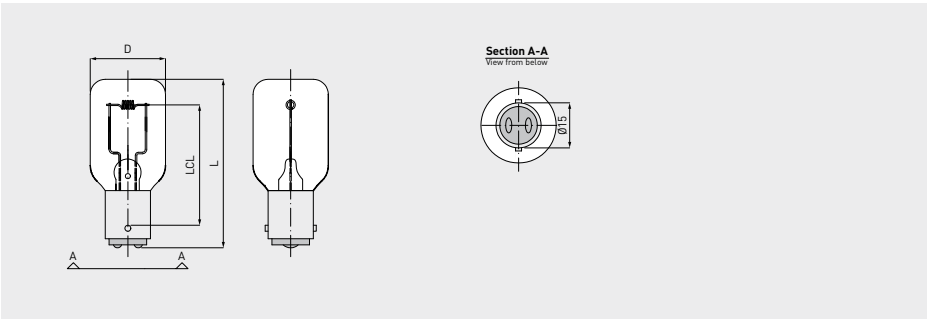
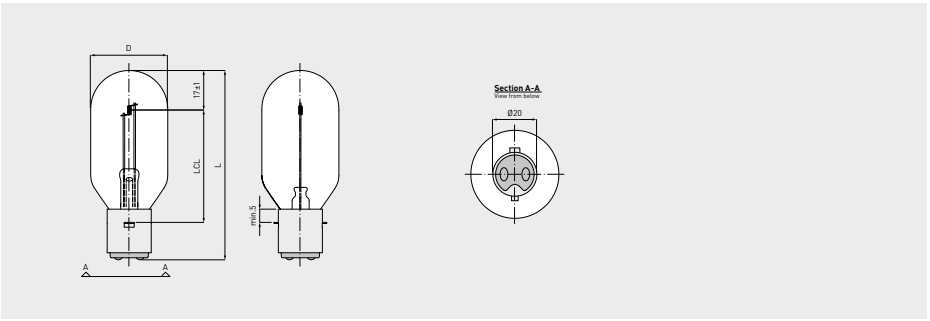


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843418	6V 25W BA20d	6	25		BA20d	35	60	38	430	250			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843422	12V 30W Ba15d/19	12	30		BA15d/19	25	56	40	400	1,500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843171	12V 50W BA20d	12	50		BA20d	35	86	51	400	400			

Projection and beam lamps

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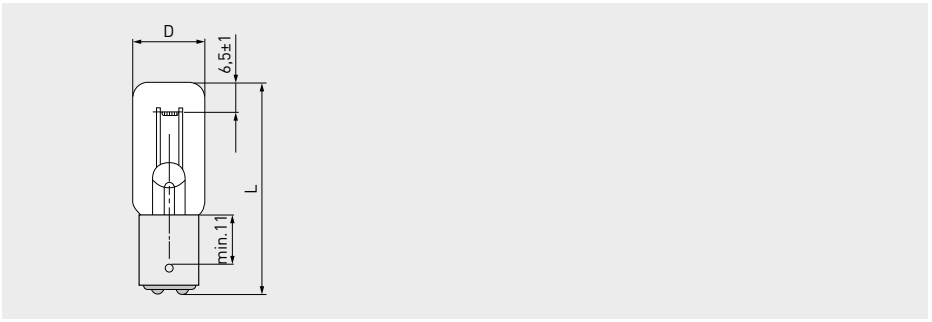
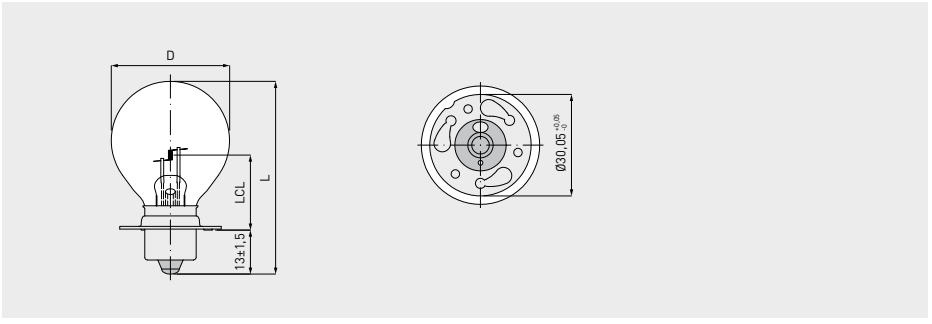
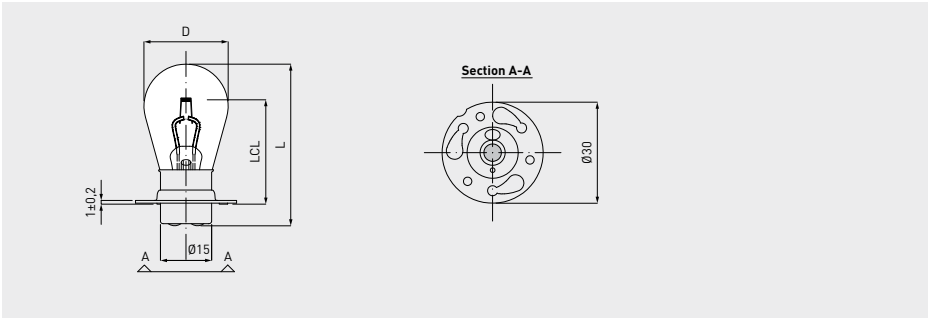


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843424	6V 30W BA15d	6	30		BA15d/19	17	53	6.5	400	300			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843426	6.3V 4A P30s	6.3	25.2	4	P30s	35	59	22.4	302	1,500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843428	6V 4.5A P30s	6	27	4.5	P30d	25	48	31	300	80			
00843425	6.1V 25W P30s	6.1	25		P30s	35	59	22.2	402	500			

Projection and beam lamps
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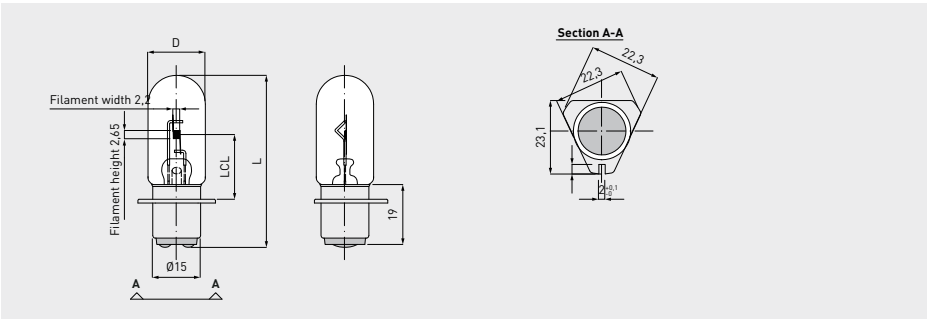
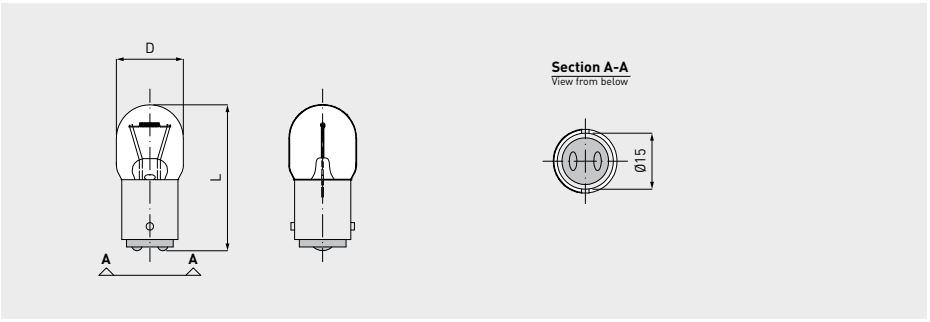
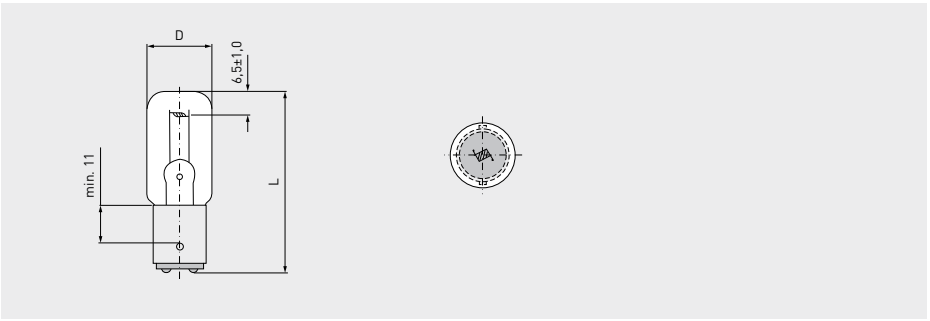


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843429	6V 30W P27d 18x57 clear axial flat-core	6	30	5	P27d	18	56	20	430	100			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843431	6V 15W BA15d 17x39 clear	6	15		BA15d	17	39		180	100			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843474	6V 15W BA15d/19 17x52 clear	6	15		BA15d/19	18	52	5.0*	205	100			
77843174	6V 15W BA15d/19 18x53 clear	6	15		Ba15d/19	18	53	6.5*	210	100			

* distance between filament and bulb dome

Projection and beam lamps

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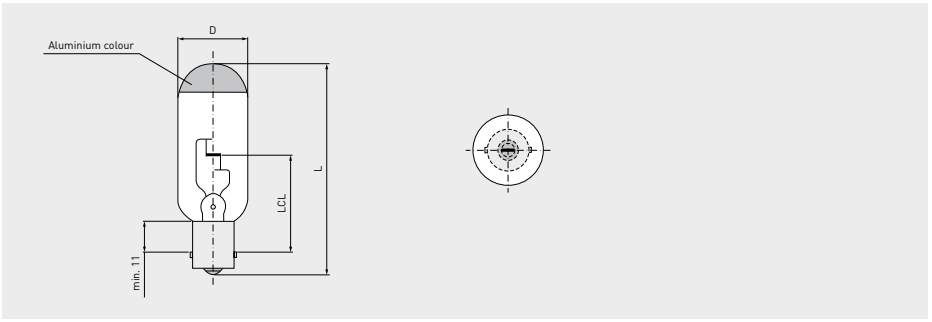
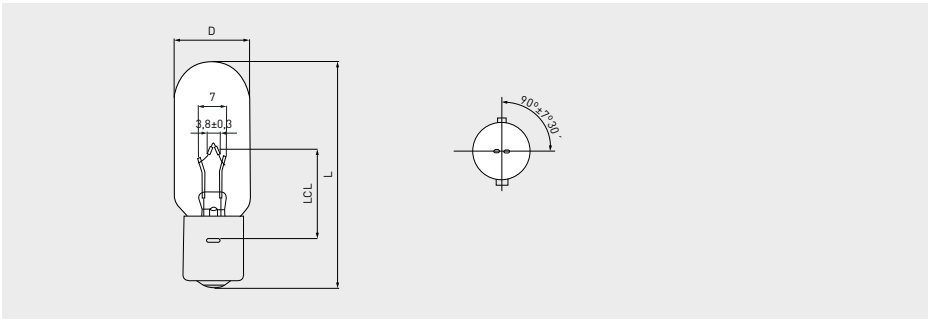
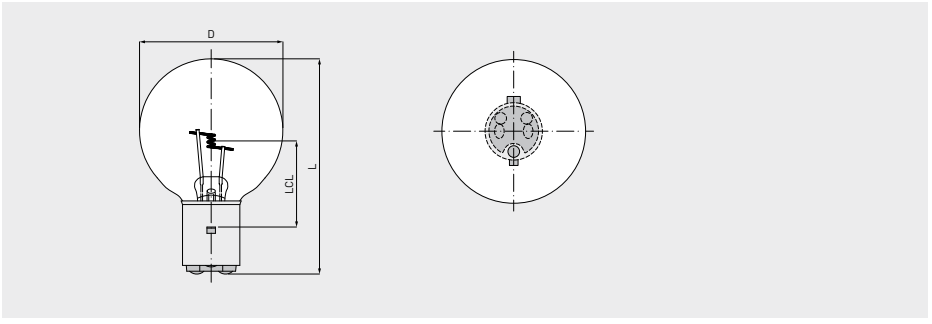


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
70843175	12V 100W BA15s Alu-Kuppe	12	100		BA15s	25	78	35	2,790	20			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
77841022	12V 35W BA20s/23 T.25x78	12	35		Ba20s/23	25	78	30	630	100			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00844064	24V 100W BA20d	24	100		Ba20d	50	75	30	2,000	100		S135	

Projection and beam lamps
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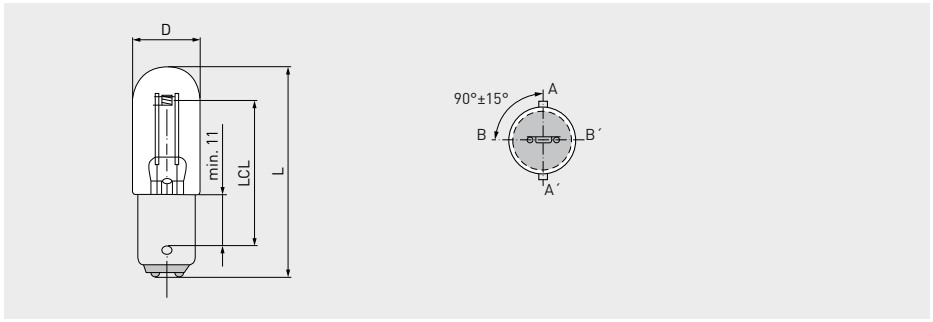
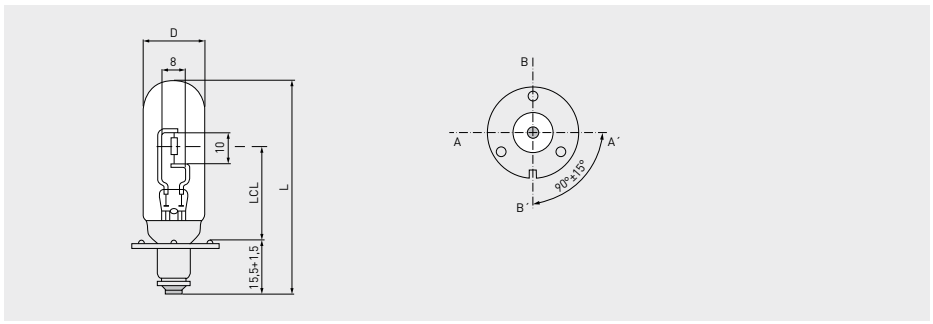
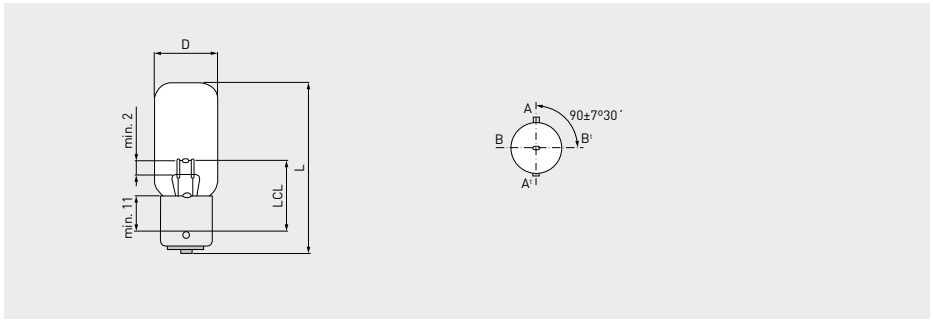


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
77843173	6V 15W BA15d	6	15		BA15d	17.0	53	35	218	100			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
77843180	5V 4A S10s with PX28s-ring	5		4	Px28s	18.5	70	31.5	260	1,000			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
77843184	12V 0.5A Ba15s	12		0.5	BA15s	17	54	20	78	100			

Projection and beam lamps

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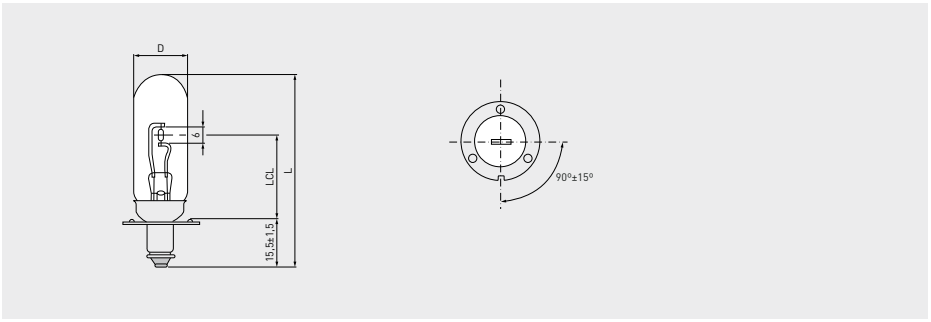
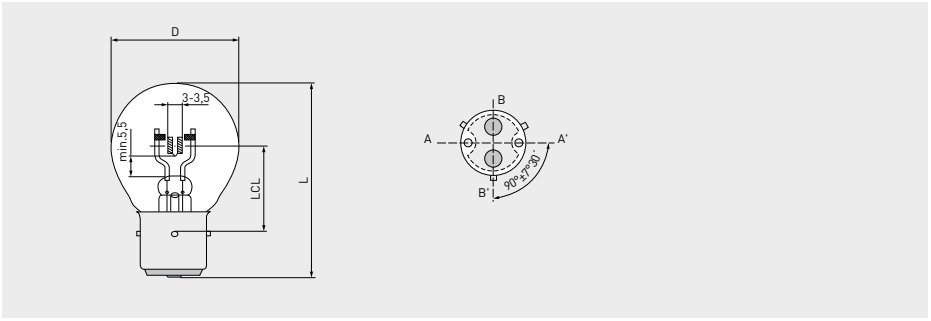
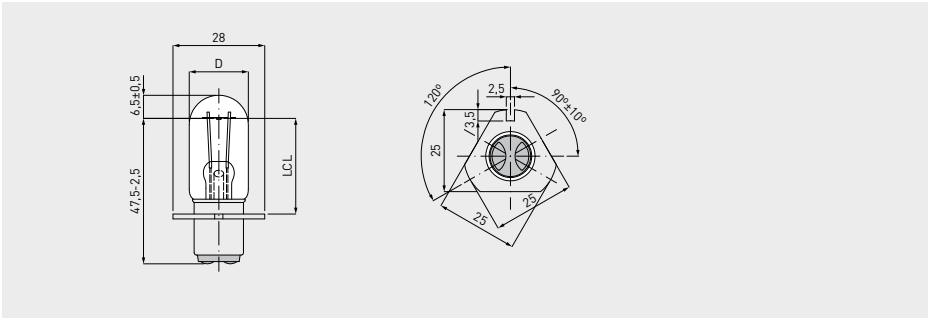


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
77843195	6.5V 1.48A S10s with PX28s-ring	6.5		1.48	PX28s-ring	18.5	70	31.5	117	500			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
77843202	16V 8A BA21d-3	16		8	BA21d-3	41	65	26.2	3,456	25			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
77843373	6V 15W S15d with centring ring	6	15	2.5	S15d/19	18	54	30	170	100			

Projection and beam lamps
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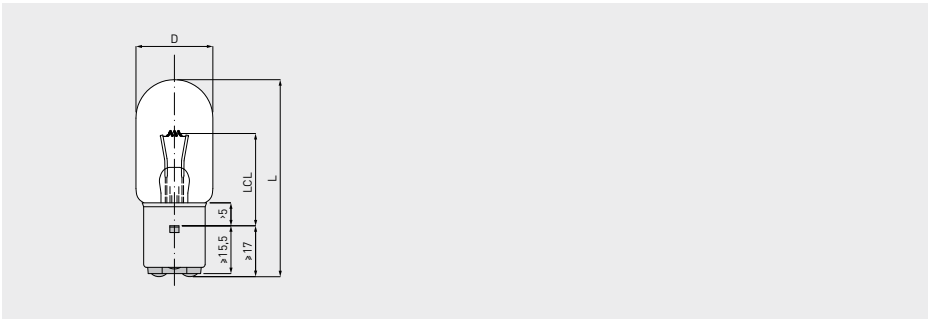
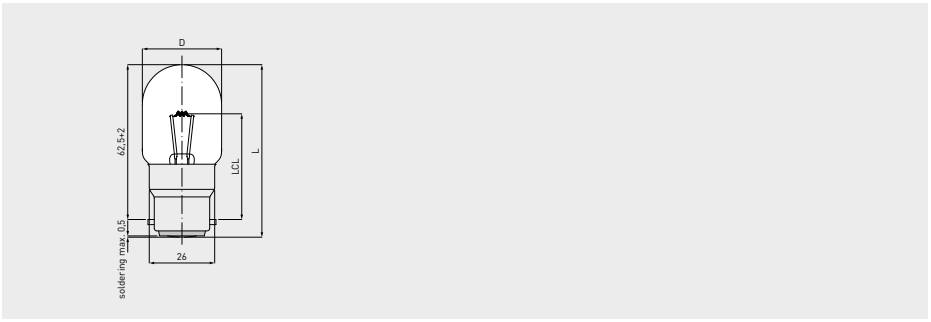
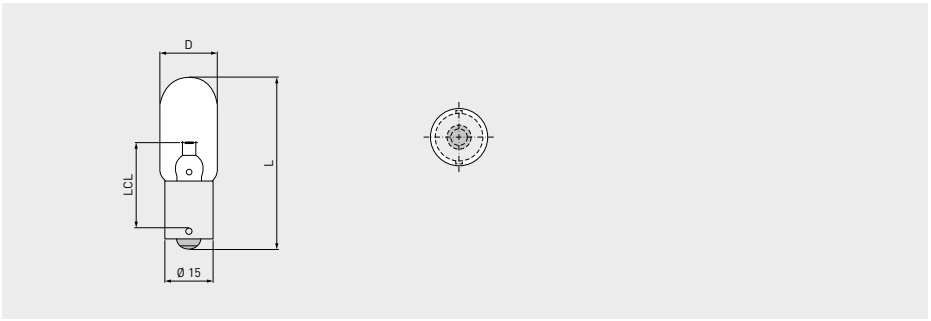


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843279	12V 24W BA20d/23	12	24		Ba20d	25	63	30	240	2,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843281	12V 24W B22d	12	24		B22d	32	72.5	42	240	2,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843285	6V 10W BA15s	6	10		Ba15s/19	19	53	27	115	5,000			
E0843286	6V 10W SX15s	6	10		SX15s	19	51	33.5	130	800			

Projection and beam lamps

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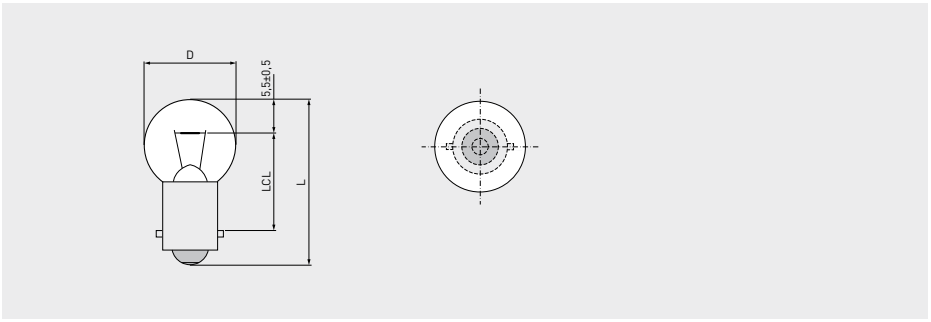
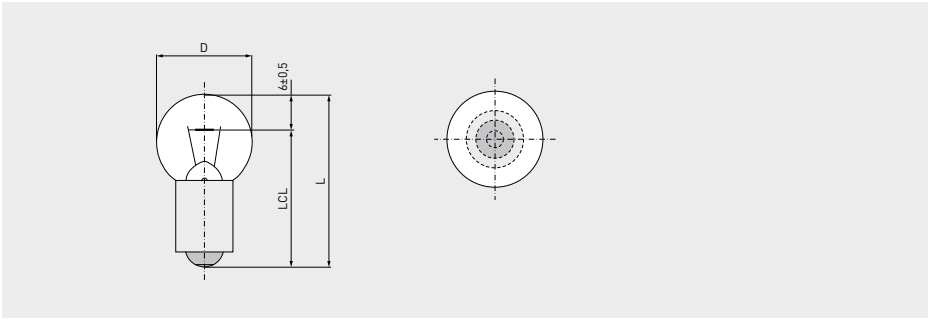
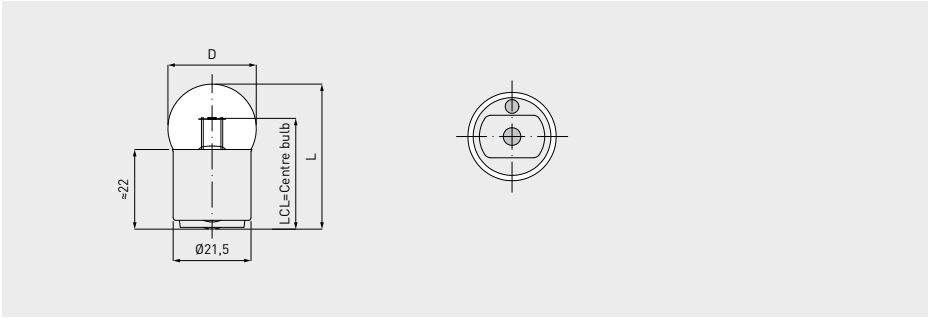


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843290	6V 1A BA9s/13	6		1	Ba9s/13	15	27	16	56	600			
E0843291	4V 4.5W S9s/13	4	4.5		S9s/13	15	27	21	36	500			



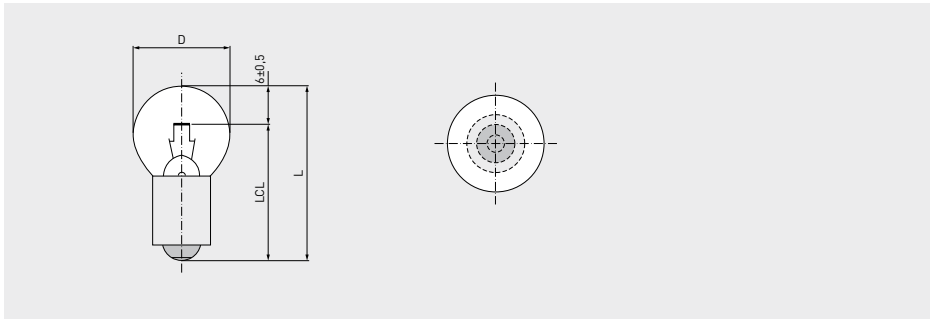
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843293	24V 3W S9s/13 without ring	24	3		S9s/13	15	27	21	9	10,000			
E0843291	4V 4.5W S9s/13	4	4.5		S9s/13	15	27	21	36	500			



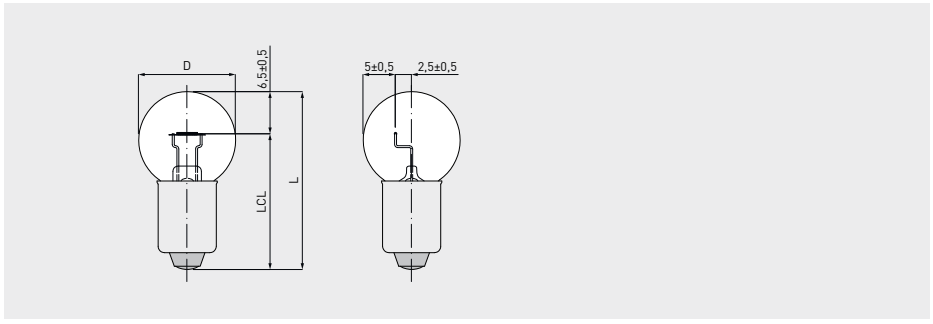
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843419	6V 1A 6W B22s 25x40 clear	6	6	1	B22s	25	42		60	200			

Projection and beam lamps
For optics and optoelectronics

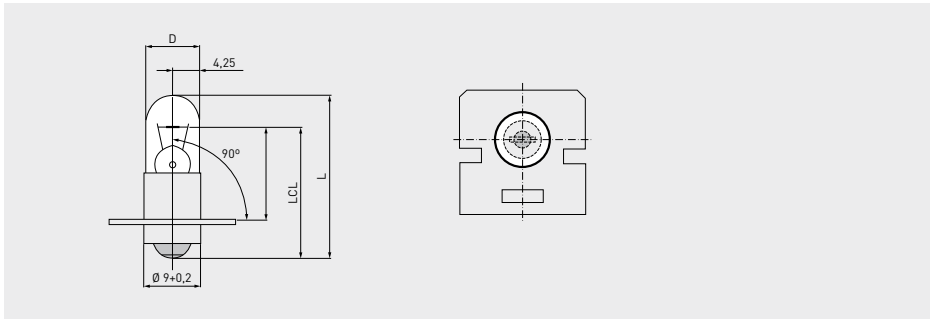
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843295	6V 6W S9s/13 without ring	6	6	0.9	S9s/13	15	27	21	63	200			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843296	6V 6W S9s/13 without ring	6	6		S9s/13	15							

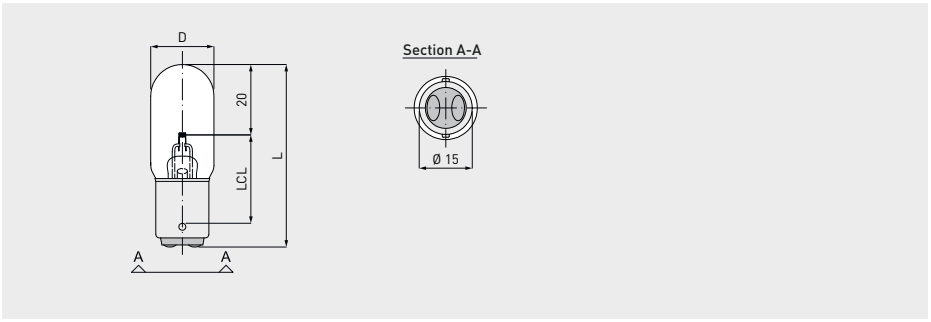


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843304	20V 5W S9s/13 with flange plate	20	5		S9s/13	8.5	27	14.8	20	1,000			
E0843351	24V 6W S9s/13 with flange plate	24	6		S9s/13	8.6	27	14.8	20	1,000			

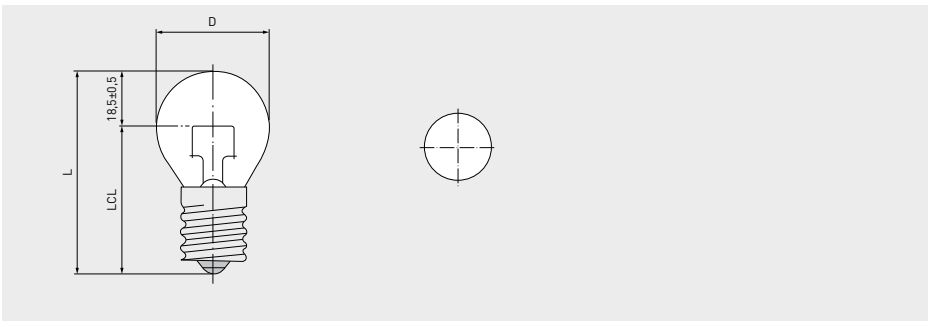
Projection and beam lamps

For optics and optoelectronics

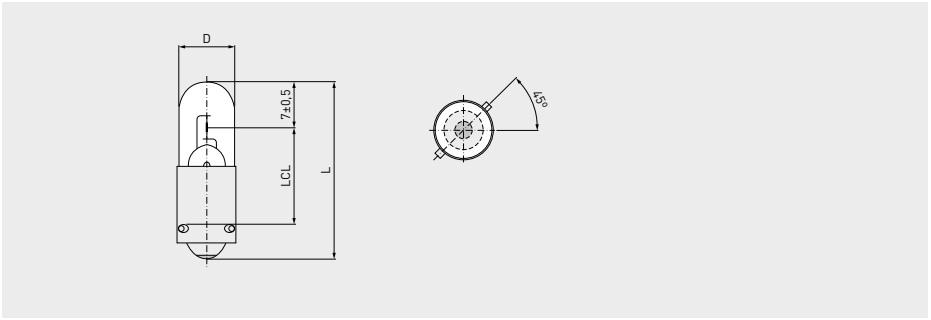
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843309	6V 15W BA15d	6	15		BA15d	19	54	25	220	200			



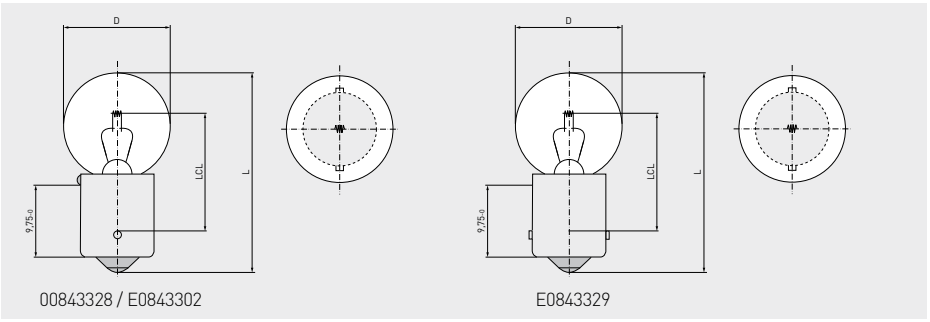
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843332	6.3V 5A E 27 projection lamp	6.3		5	E27	40	65	46		120			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843324	6V 4W BA9s transversal	6	4		BA9s	8.5	25.5	15.5	22	1,000			
E0843327	6V 4W BA9s axial	6	4		Ba9s/14	8.5	27	15	26	1,000			
E0843301	6V 4W BA9s/14 transversal	6	4		Ba9s/14	8.5	25.5	15	17				
E0843338	6V 5W Ba9s/14 transversal	6	5		Ba9s/14	8.5	27	15.5	28.5	5,000			
00843386	6V 6W BA9s	6	6		BA9s	8.5	28	15	60	200			
E0843298	6V 6W BA9s/14 transversal	6	6		Ba9s/14	8.5	27	14.4	27	10,000			
E0843369	6V 6W BA9s transversal	6	6		BA9s	8.5	27	16	68	500			

Projection and beam lamps
For optics and optoelectronics

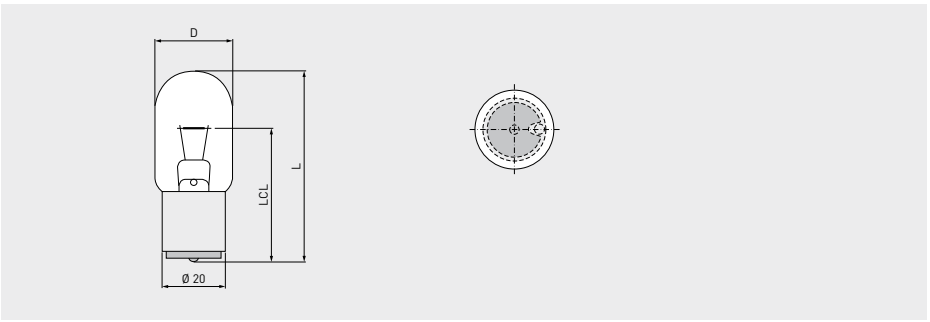
For special features, specific benefits and areas of use see page 171



00843328 / E0843302 E0843329

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843328	6V 6W BA9s	6	6		BA9s	15	27	15	60	200			
E0843329	6V 6W BA9s	6	6		BA9s	15	27	16	60	200			
E0843302	6V 10W BA9s/14	6	10		Ba9s/14	15	27	15	130	200			

Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843330	6V 0.55A S9s/13 o.ring	6		0.55	S9s/13	15	28	19.5	19	500			

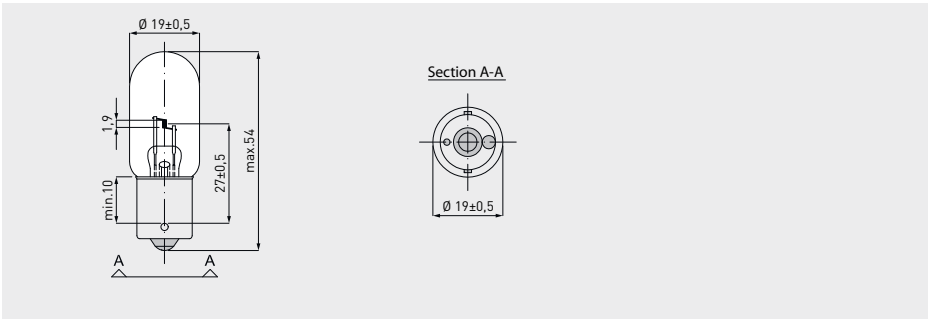


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
E0843334	6V 20W H20s	6	20		H20s	25	60	42	280	500			

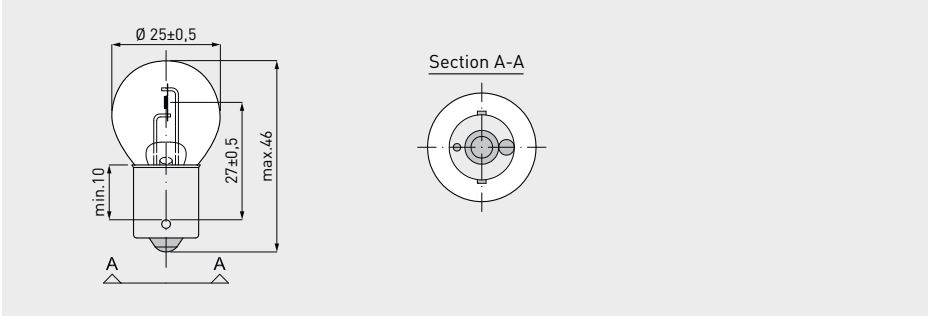
Projection and beam lamps

For optics and optoelectronics

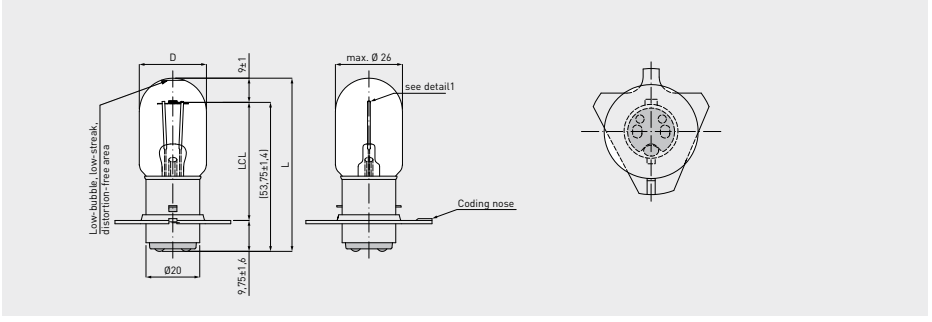
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
E0843335	6V 15W Ba15s	6	15		BA15s	19	54	27	150	600			



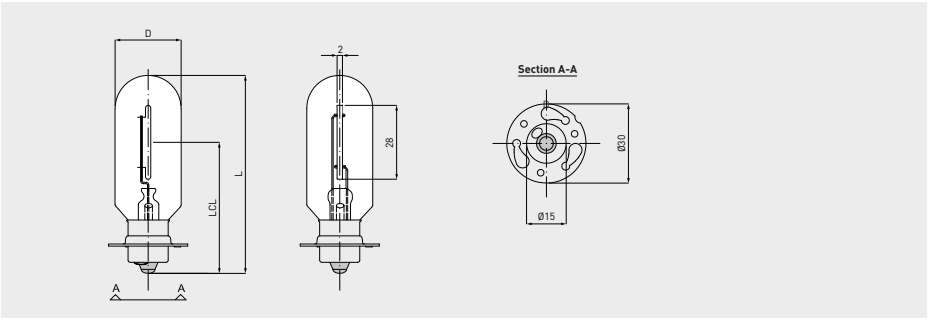
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
E0843340	6V 10W BA15s axial	6	10		BA15s	26	46	27	90	600			



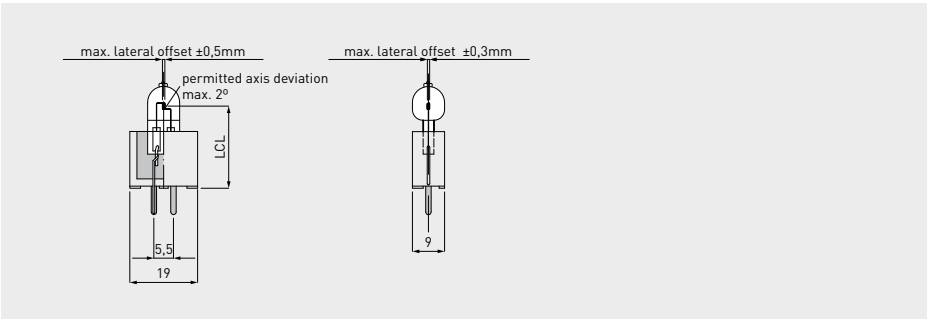
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
X0843113	6V 30W P47d (BA20d with ring) 26x65 clear	6	30	5	Ba20d/26	26	65	44	580	100		S10	

Projection and beam lamps
For optics and optoelectronics

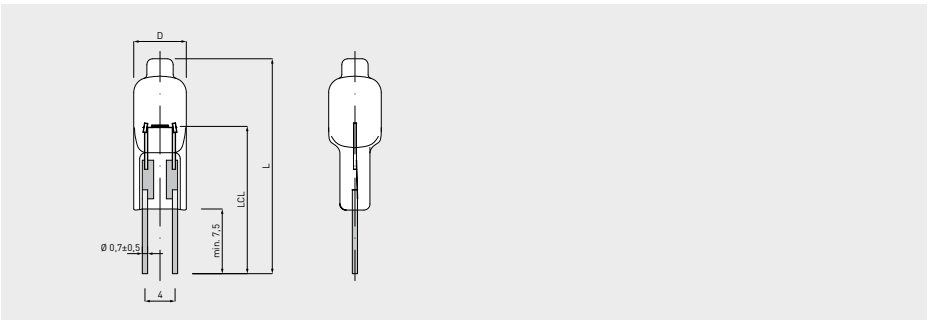
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845302	2V 10A Sx15s with P30 ring 25x75 W-band	2		10	P30s	25	75						



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847115	6V 10W G 5.3 Halogen	6	10		G 5.3	10		23	90	4,000			

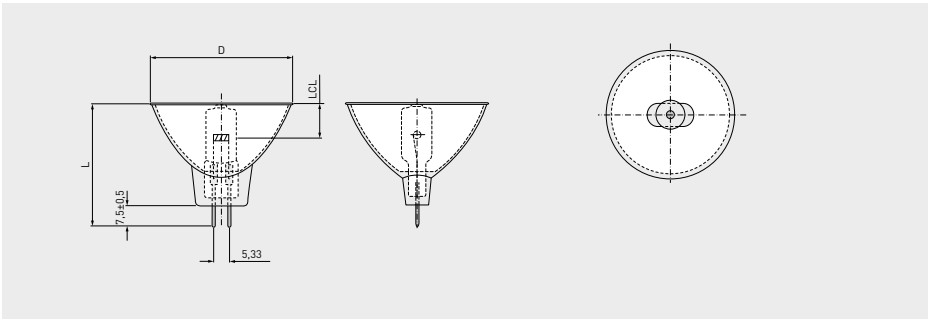


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847121	4V 4W T7.7x31 Cl	4	4		G4	7.7	31	19.6	56	250			
00847133	4V 5.5W G4 T.8x31 CL	4	5.5		G4	8	31	19.5	80	100			

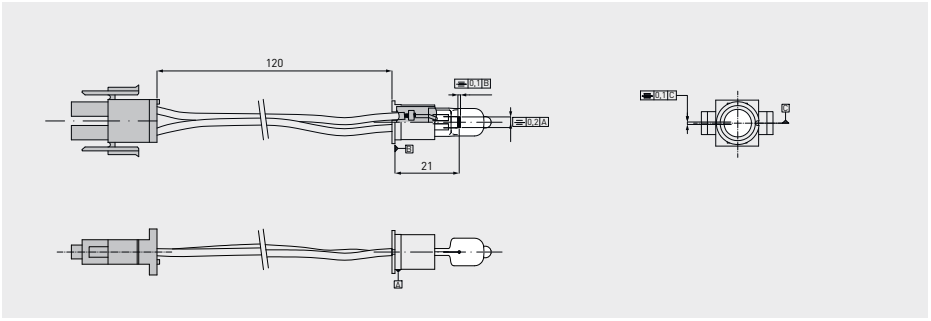
Projection and beam lamps

For optics and optoelectronics

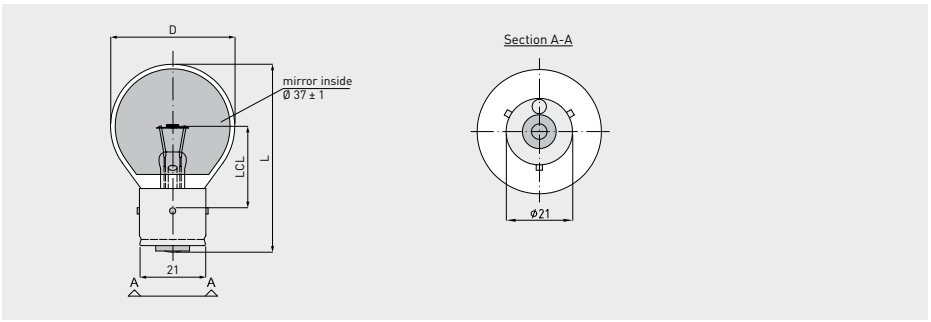
For special features, specific benefits and areas of use see page 171



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847500	24V 250W GX5.3 CC6 50MM reflector	24	250		GX 5.3	50	44		7,000	50			



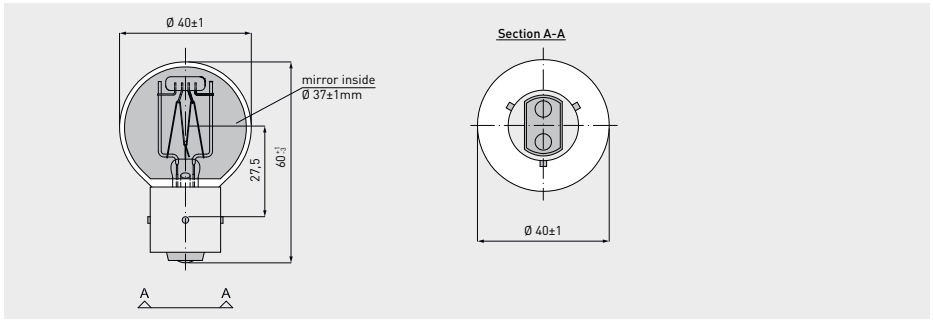
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
TONLAMPE	6V 20W G4 + special cap	6	20			10	33	21					



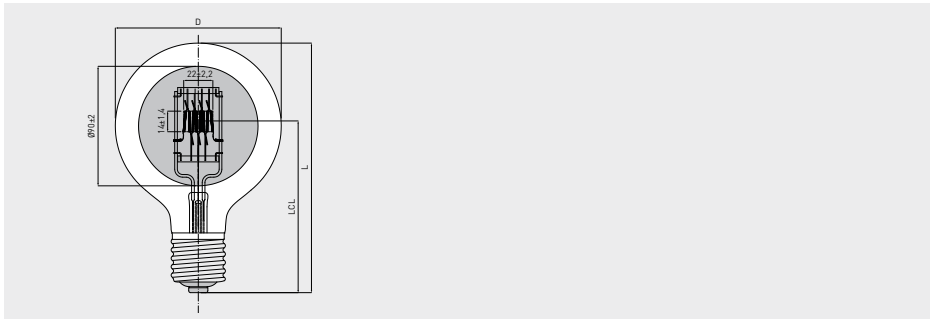
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00833409	6V 30W Ba21s3 SM	6	30		Ba21s3	40	61	26.2	465	300			

Projection and beam lamps
For optics and optoelectronics

For special features, specific benefits and areas of use see page 171

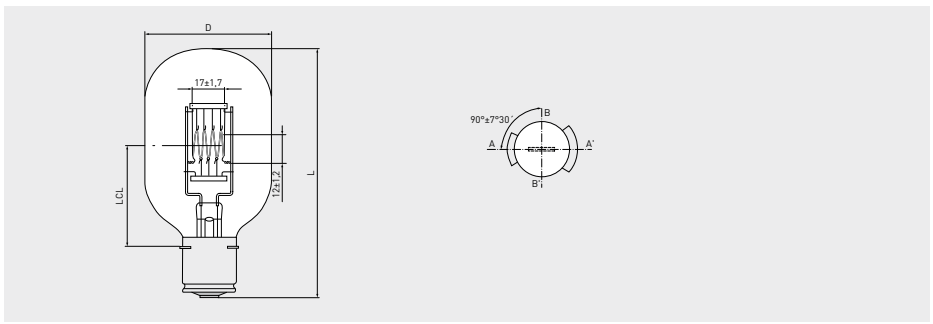


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00833408	230V 75W Ba21d3 SM	230	75		BA21d3	40	61	26.2	820	300			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
70833243	230V 1000W E40/45 SM	230	1,000		E40/45	125	193	125	23,000	100			
70833254	230V 1000W E40 SM	230	1,000		E40	125	193	125	26,000	40			

SM = side mirror

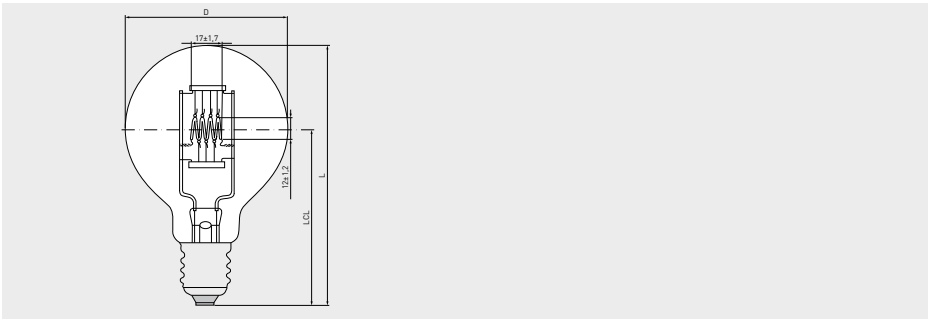


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
70843265	220V 500W P28s	220	500		P28s	65	135	55.6	10,950	100			

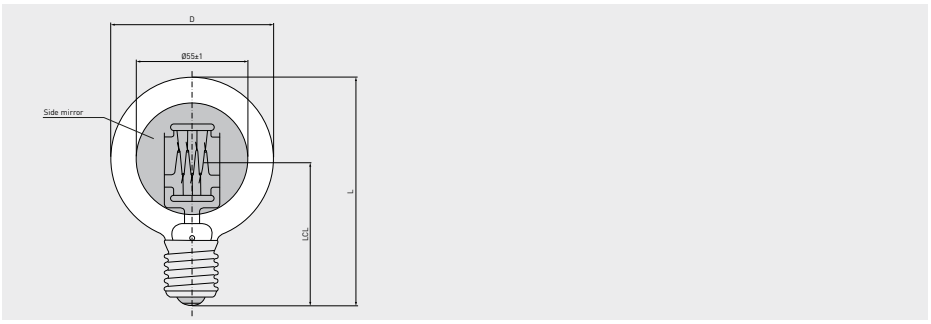
Projection and beam lamps

For optics and optoelectronics

For special features, specific benefits and areas of use see page 171

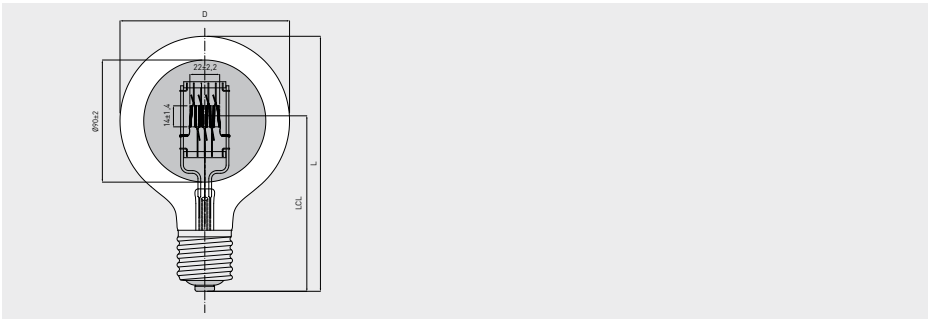


Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
70843276	220V 500W E27	220	500		E27	80	129	85	10,950	100			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
77833215	220V 250W E27/30 SM	220	250		E27/30	80	115	70	4,375	70			
70833219	220V 500W P28s SM	220	500		P28s	80	125	55.6	10,950	70			

SM = side mirror



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00833228	240V 1,000W E40 SM	240	1,000		E40	125	193	125	23,000	100			

SM = side mirror

Projection and beam lamps
For optics and optoelectronics

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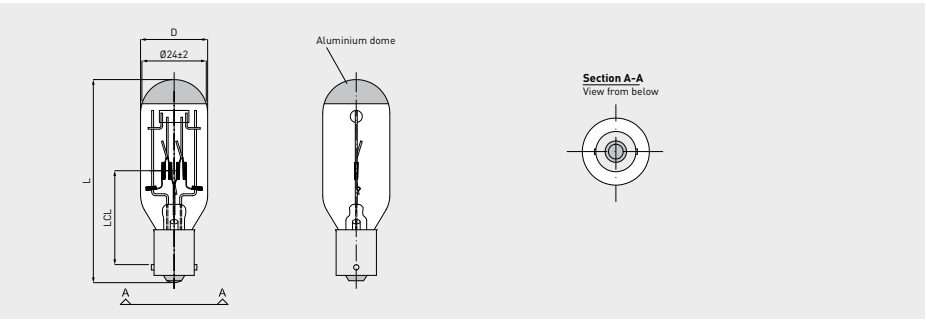
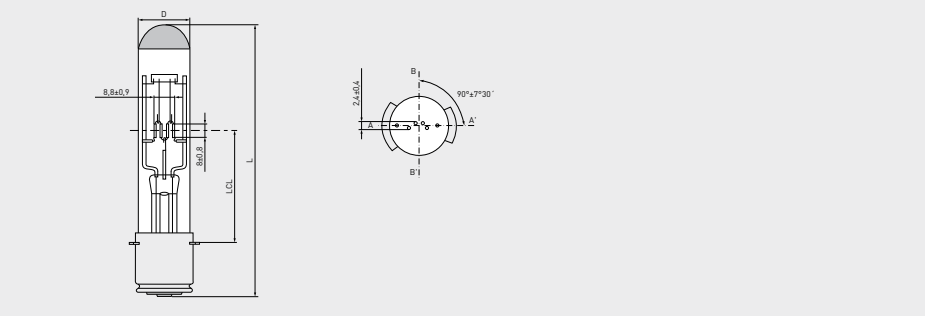


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
77843179	220V 100W BA15s Aluminium dome	220	100		BA15s	25	78	35	1,680	25			
77843178	220V 150W BA15s Aluminium dome	220	150		BA15s	25	90	35	2,740	25			
77843208	240V 300W BA15s Aluminium dome	240	300		BA15s	28	104	35	6,000	25			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
77843246	220V 150W P28s/33 Aluminium dome	220	150		P28s/33	29	135	55.6	2,740	25			
77843389	230V 100W P28s Aluminium dome	230	100		P28s	29	135	55.6	1,700	25			
77843247	230V 250W P28s Aluminium dome	230	250		P28s	32	135	55.6	4,880	50			

Lamps for scales

Transparency scales from different manufacturers are still in operation. They are a stable, functional form of scales that many people swear by. We make every effort to keep appropriate lamps for most constructions in stock. We can, under certain circumstances, manufacture outdated models individually.

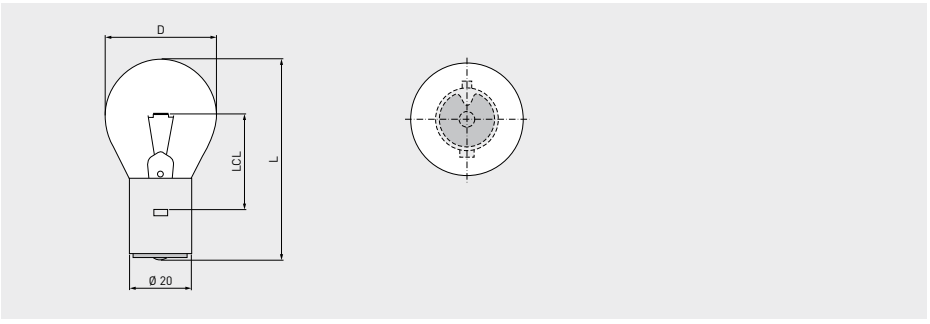
Lamps for scales

For transparency scales

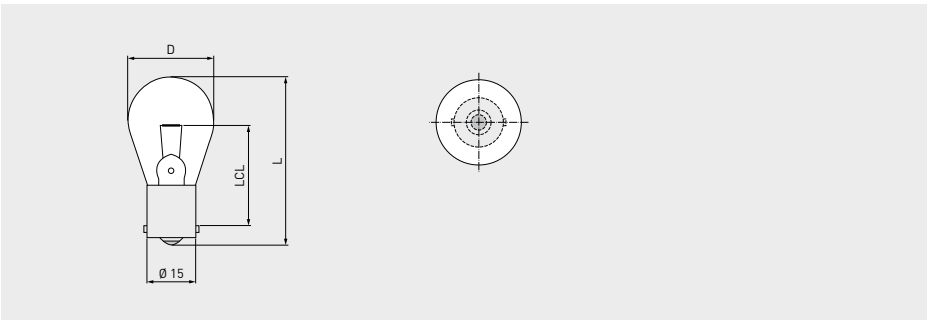
Special features:
- precision of manufacture
- minimal tolerances in the positioning of the filaments

Specific benefits:
- original lamps for optimum device function

Areas of use:
- transparency scales



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00841001	5.5V 30W BA20s	5.5	30		BA20s	36	64	30	350	800		S135	

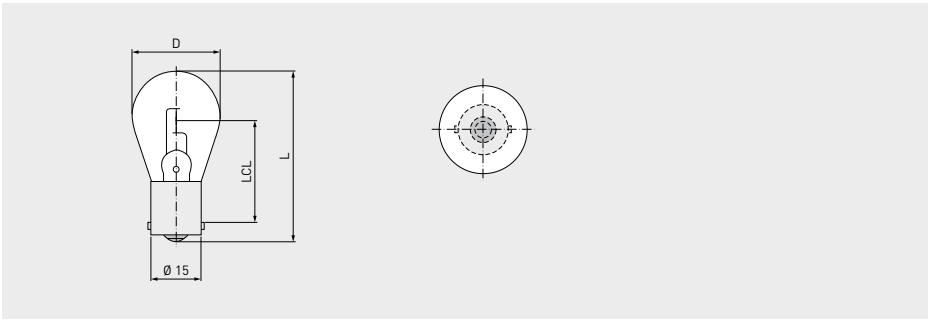


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00841002	6V 1.4A BA15s	6		1.4	BA15s	26	50	30	85	2,000		S135	

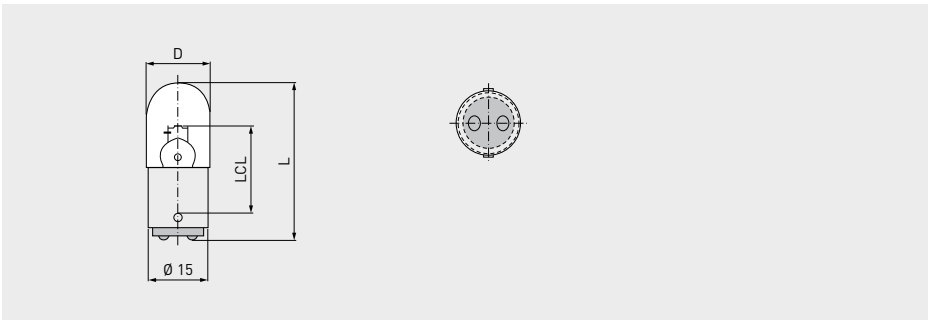
Lamps for scales

For transparency scales

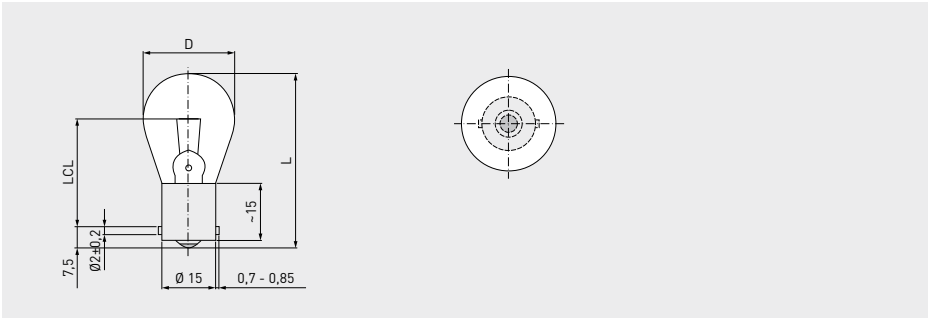
For special features, specific benefits and areas of use see page 201



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00841005	6V 15W BA15s	6	15		Ba15s	25.5	52	31	145	2,500		S135	
00841006	6V 15W BA15d	6	15		Ba15d/19	25.5	52	31	145	2,500			



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00841007	6.3V 5W BA15d	6.3	5		BA15d	16	40	22.5	45	1,000		S135	

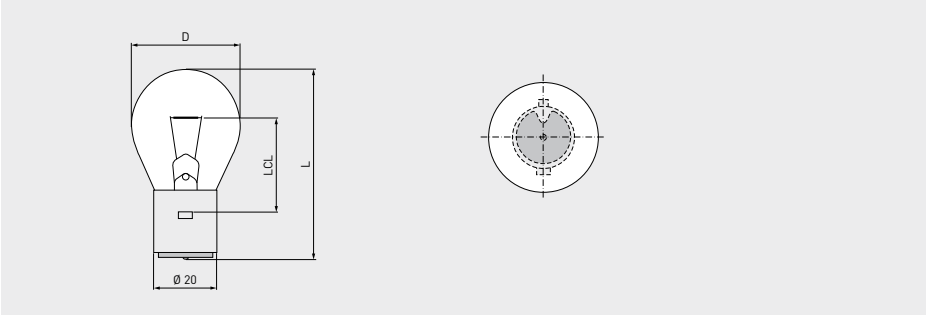


Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00841008	6.5V 9,1W BA15s	6.5	9.1	1.4	BA15s	25	48	30	90	700		S135	

Lamps for scales

For transparency scales

For special features, specific benefits and areas of use see page 201



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00841009	12V 35W BA20s cc6	12	35		BA20s	36	60	30	390	400		S135	
00841010	12V 35W BA20s c6	12	35		BA20s	36	60	30	400	200		S135	
00841014	12V 40W BA20d/23	12	40		BA20d	36	67	30	795	500		S135	
00841012	12V 45W BA20s	12	45		BA20s	36	60	30	510	2,500		S135	

Selling is showing

Anyone who presents their goods, shows them in their proper light, sells. Shop lighting has now become an important discipline of goods presentation. Shop window lighting, light to create an atmosphere in a room or spotlights highlighting specific goods: the right lamp is the sine qua non for the emotional added value of shops and products.

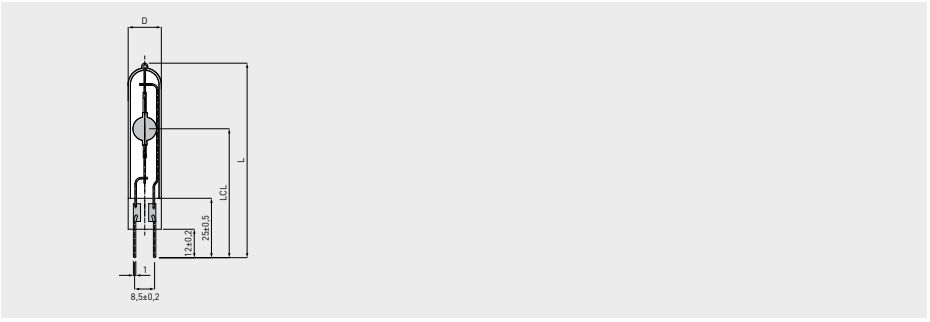
Lamps for shop lighting have a longer life, a good light yield at low consumption and pleasant light colours. Because shop lighting must create a comfortable light atmosphere and illuminate the products as faithfully to their colour and attractively as possible.

Lamps for shop lighting

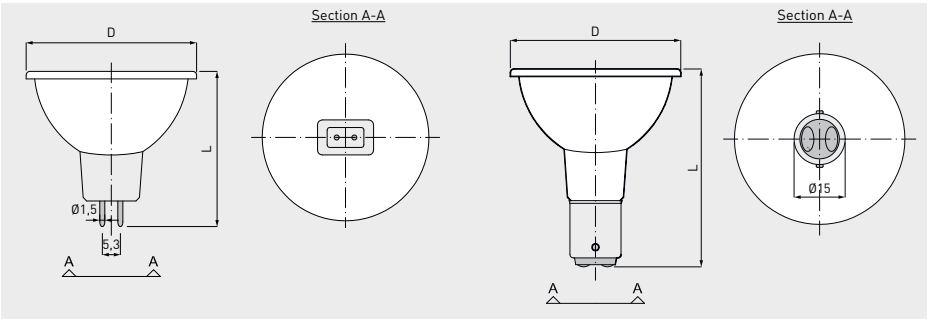
Special features:
- precision of manufacture
- special colour temperature
- long life

Specific benefits:
- the sales-promoting illumination of goods

Areas of use:
- shop lighting
- illumination for specific goods such as wurst and baked goods



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00014728	12V 45W G8.5 Masterline TC	12	45		G8.5	14	85	52	1,100	5,000			
00014729	12V 60W G8.5 Masterline TC	12	60		G8.5	14	85	52	1,600	5,000			

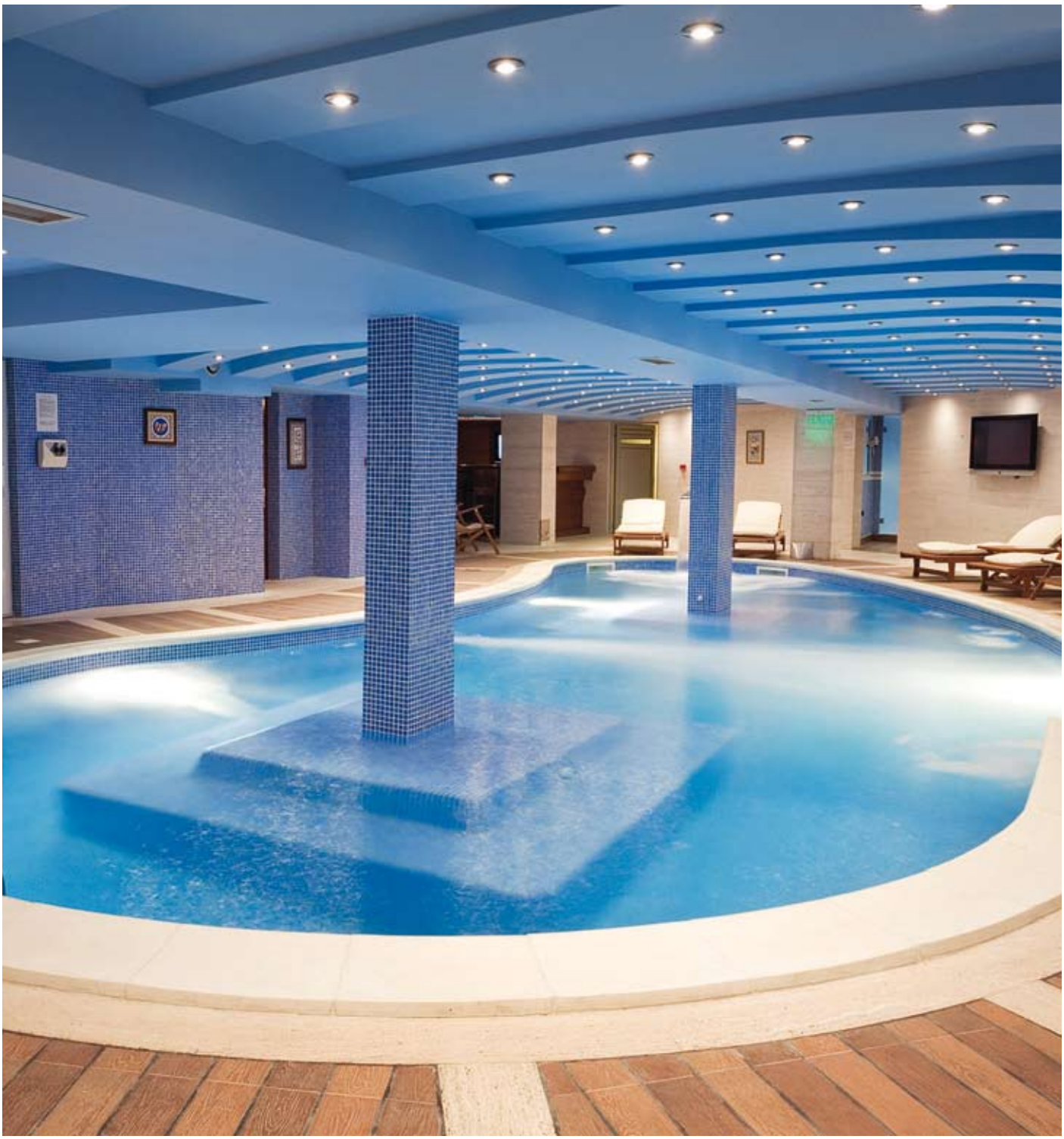


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	angle of radiation	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8500310501	cold mirror reflector lamp 12V 20W disc 01	12	20		Gu5.3	51	46	35°	550	4,000			
8500310601	cold mirror reflector lamp 12V 35W disc 01	12	35		Gu5.3	51	46	35°	1,020	4,000			
8500310602	cold mirror reflector lamp 12V 35W disc 02	12	35		Gu5.3	51	46	35°	1,080	4,000			
8500310603	cold mirror reflector lamp 12V 35W disc 03	12	35		Gu5.3	51	46	35°	1,200	4,000			
8500310701	cold mirror reflector lamp 12V 50W disc 01	12	50		Gu5.3	51	46	35°	1,530	4,000			
8500310702	cold mirror reflector lamp 12V 50W disc 02	12	50		Gu5.3	51	46	35°	1,620	4,000			
8500310703	cold mirror reflector lamp 12V 50W disc 03	12	50		Gu5.3	51	46	35°	1,800	4,000			
8500311503	cold mirror reflector lamp 12V 20W Ba15d disc 03	12	20		BA15d	51		35°	550	4,000			
8500311701	cold mirror reflector lamp 12V 50W Ba15d disc 01	12	50		BA15d	51		35°	1,530	4,000			
8500311703	cold mirror reflector lamp 12V 50W Ba15d disc 03	12	50		BA15d	51		35°	1,800	4,000			

Disc 01 used for: meat products;
Disc 02 used for: baked goods, milk products, fruit and vegetables;
Disc 03 used for: with UV filter glasses

Light has many meanings

Light is not only used for signal lamps or projection purposes, not only is light indispensable in the field of medicine, in the studio or on the stage: architecture, including the illumination of rooms, external and internal, also needs special lamps.
If art is to be presented attractively in a gallery or museum, then there must be good lighting conditions. And it really takes the right lighting to turn a swimming-pool into a wellness oasis.
And just as it is only light that can make the events on the stage what they are, architects and planners need light to generate the right atmosphere for rooms and spaces.

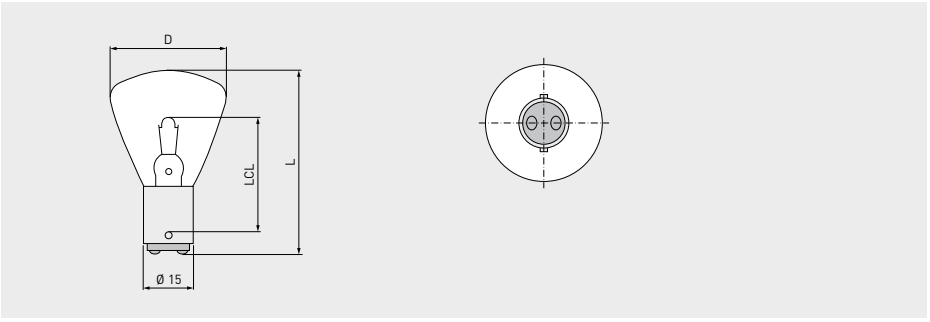


Lamps for special lighting purposes
Individual applications

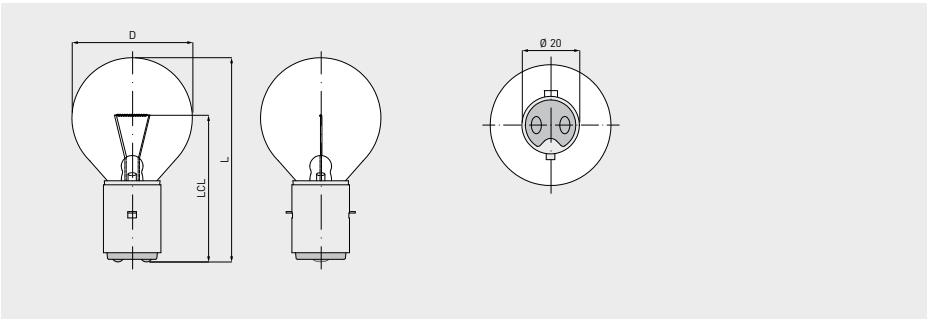
Special features:
- special types made to customer specification
- precision of manufacture

Specific benefits:
- conventional types with a corrosion-proof nickel-plated cap
- also available in halogen and LED versions

Areas of use:
- special illuminating purposes
- low-voltage swimming-pool lighting



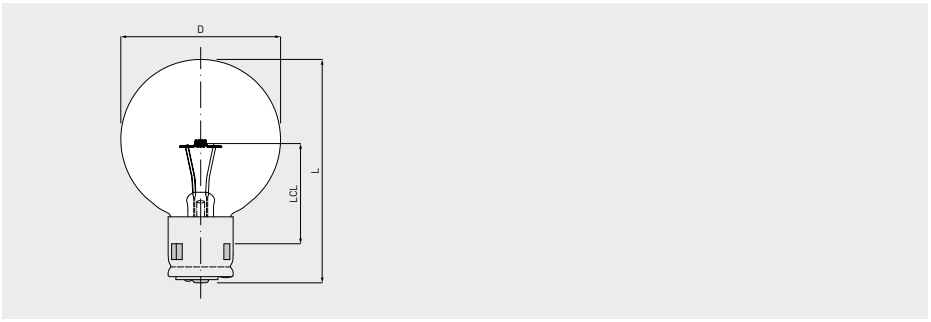
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00842008	12V 35W BA15d	12	35		BA15d	35	56	33	480	1,000			
00944012	12V 35W BA15s	12	35		BA15s	35	56	32.5	460	200			



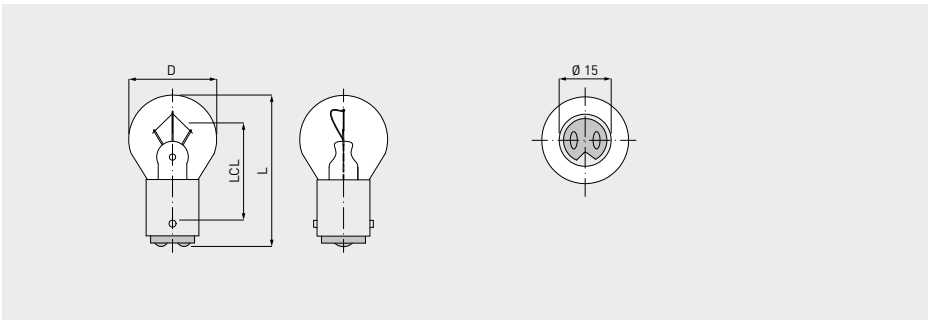
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00842443	24V 50W BA20d/26	24	50		Ba20d	42	71	36.5	500	2,000		S135	

Lamps for special lighting purposes
Individual applications

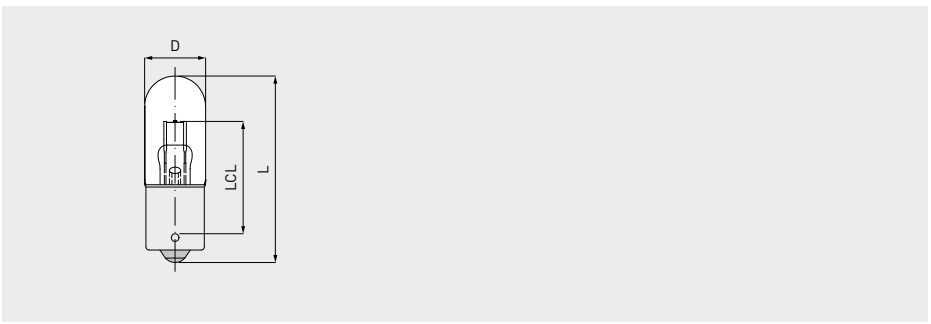
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00842121	24V 100W B24s/3	24	100		B24s/3	60	85	37	2,000	100			



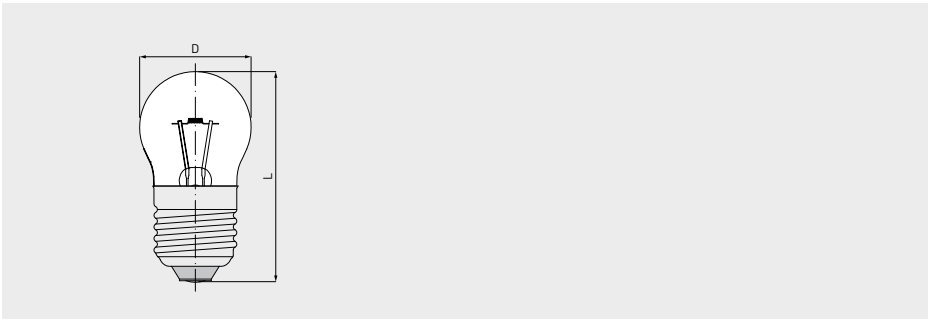
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00842507	30V 10W BA15d/19	30	10		BA15d/19	25	46	22.5	85	1,000			
00842015	30V 15W BA15s	30	15		BA15s	25	45	20	190	800			
00845301	85V 10W Ba15s/19 25x43 clear	85	10		Ba15s/19	25	45	Centre bulb	90	1,000			



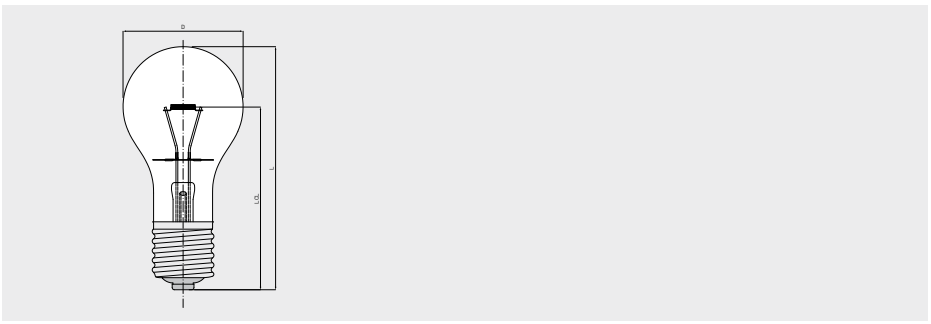
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843001	3V 1.5A BA15s	3		1.5	BA15s	16	49	30	40	500			

Lamps for special lighting purposes
Individual applications

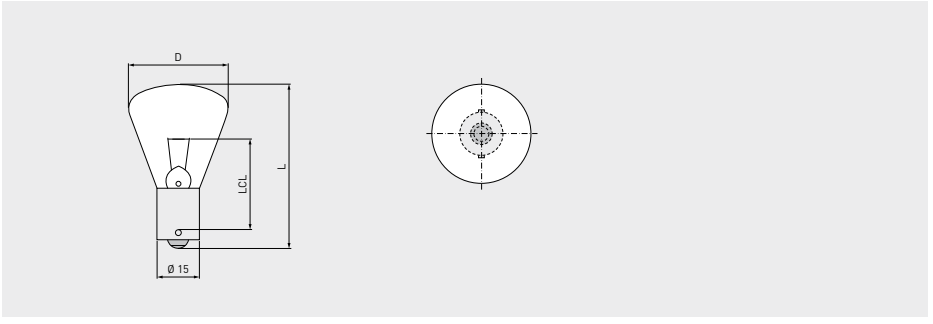
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843033	6V 48W E27	6	48		E27	35	70	Centre bulb	850	300			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00843404	24V 300W E40	24	300		E40	80	165	121	6,000	100			
00845320	48V 300W E40	48	300		E40	110	235	Centre bulb	3,300	2,000			



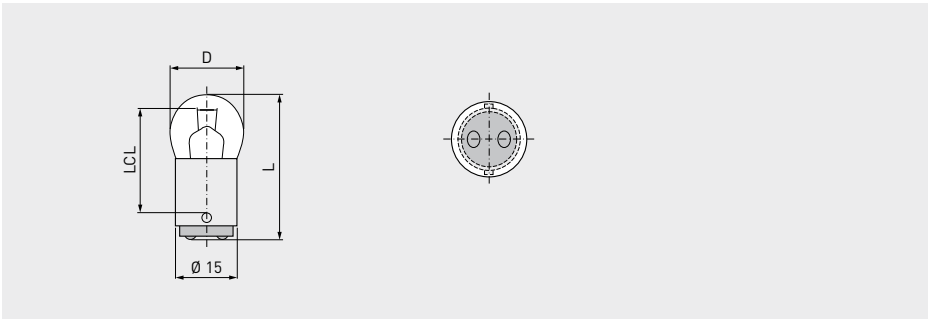
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845001	6V 15W BA15s	6	15		BA15s	35	57	31.8	175	1,500			
00845004	12V 10W BA15s	12	10		BA15s	16	44	28	145	15,000*			
00944017	24V 35W BA15s	24	35		BA15s	35	56	31.8	300	1,000			
00945038	24V 35W BA15d	24	35		BA15d	35	56	31	600	300			
00144500	24V 45W BA15s	24	45		BA15s	35	56	31.8	500	1,000			
00845149	24V 15W BAU 15d	24	15		Bau15d	35	57	24	170	1,000			

* at 10V

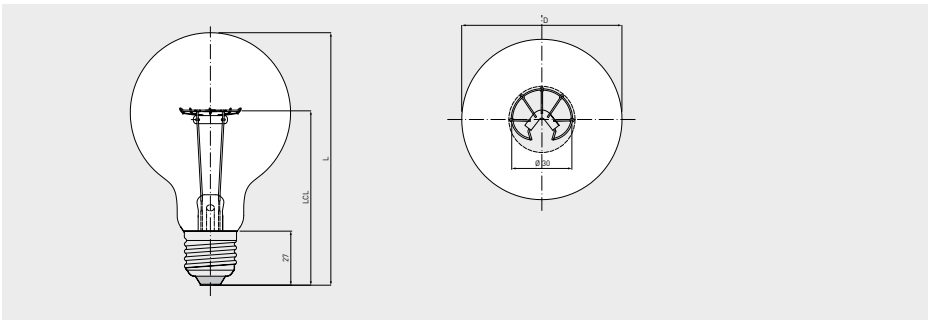
Lamps for special lighting purposes

Individual applications

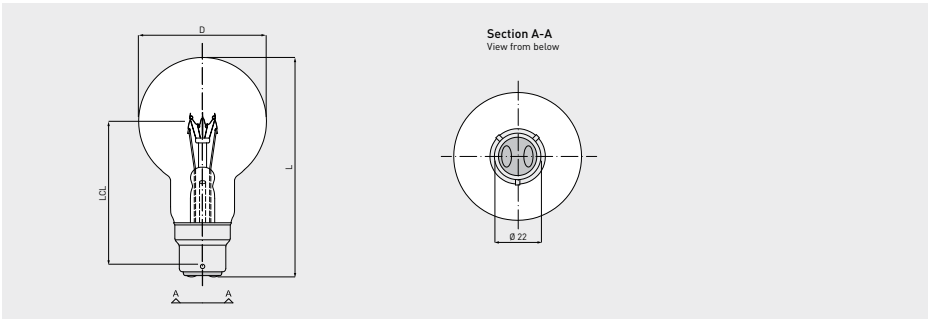
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845006	24V 5W BA15d	24	5		BA15d	18	35	20	40	1,000			
00845128	24V 5W BAU15d	24	5		Bau15d	18	38	8*	25	6,000			



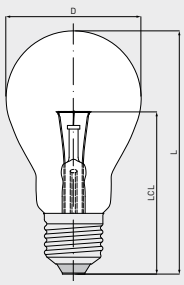
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845272	85V 250W E27/27	85	250		E27/27	80	126	87	3,300	1,000			



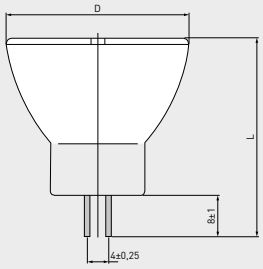
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845295	55V 25W B22d clear shock-resistant	55	25		B22d/25x26	60	103	Centre bulb	220	1,000			

Lamps for special lighting purposes
Individual applications

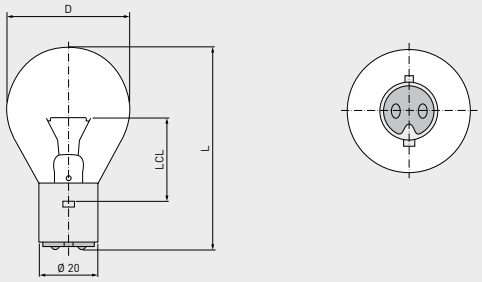
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00845298	27V 60W E27	27	60		E27	60	103	Centre bulb	850				



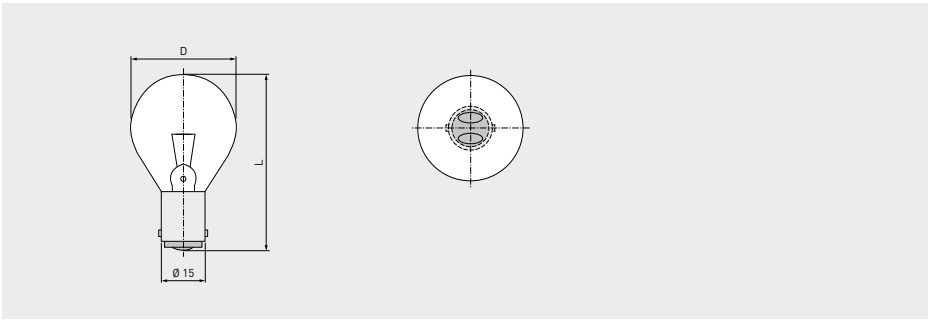
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00847081	12V 10W G4 KLS reflector w. frontal disc	12	10		G4	35	38		100	2,000			
00847079	12V 20W G4 KLS reflector	12	20		G4	35	38		250	2,000			



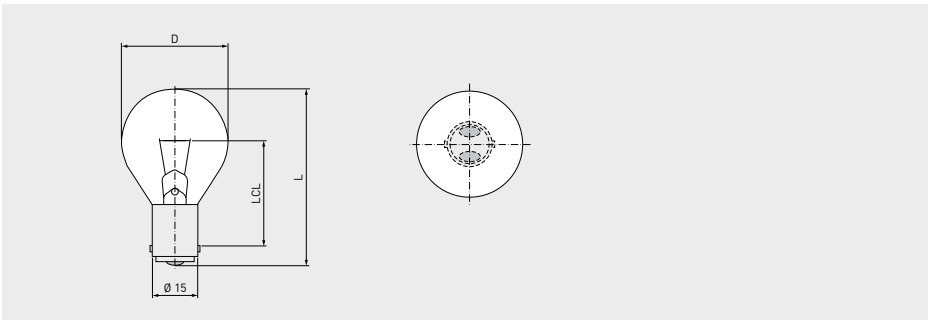
Article no.	Description	V	W	Am-perage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Lumi-nous f ux lm	Average life h	Individual life h	Burning position	PU
00944018	24V 35W BA20d	24	35		BA20d	35	67	30	550	100			
00945019	12V 50W BA20d	12	50		BA20d	40	67	30	700	1,000			
00945024	12V 75W BA20d clear	12	75		BA20d	40	72	30	850	500			
00845251	24V 50W BA20d	24	50		BA20d	40	68	34.5	670	300			
00945084	24V 50W BA20d	24	50		BA20d	40	67	30	580	1,500			
00945068	24V 75W BA20d	24	75		BA20d	40	69	30	1,060	1,500			
00935046	24V 100W BA20d	24	100		BA20d	40	72	30	1,000	1,000			
00945045	24V 100W BA20d	24	100		BA20d	40	69	30	1,000	1,000			
00935054	42V 100W BA20d	42	100		BA20d	40	67	30	1,100	1,000			
00945053	42V 100W BA20d	42	100		BA20d	40	69	30	1,100	1,000			

Lamps for special lighting purposes
Individual applications

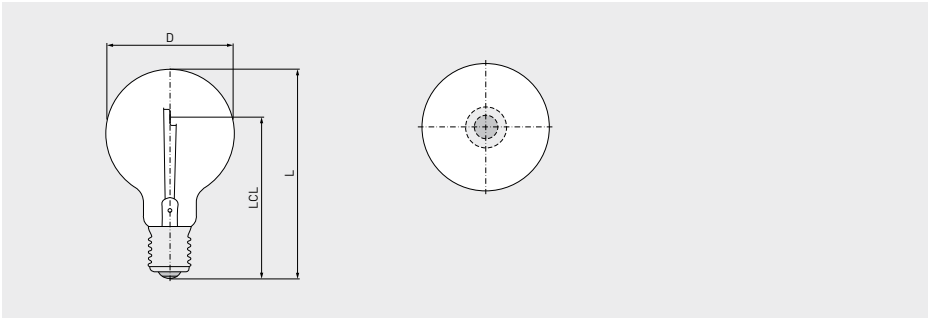
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00945033	24V 25W BA15d	24	25		BA15d	36	60		410	300			



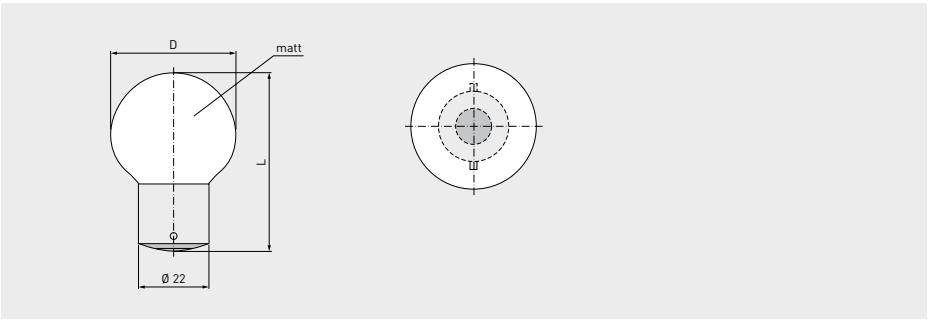
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00945042	24V 50W BA15d	24	50		BA15d	35	58.5	35	650	1,000			



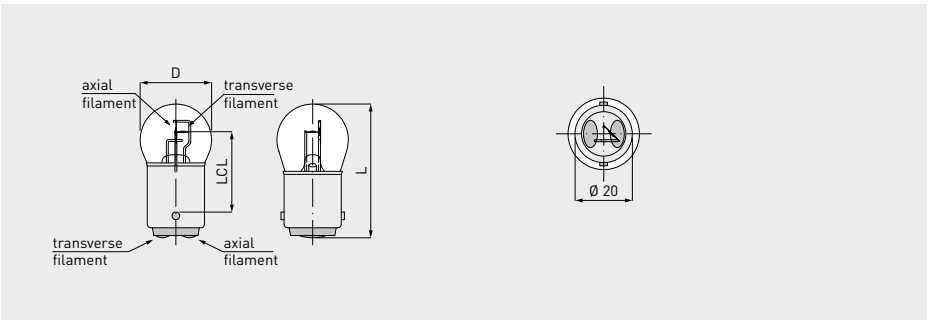
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00945205	24V 150W E27	24	150		E27	80	130	100	3,800	200			

Lamps for special lighting purposes
Individual applications

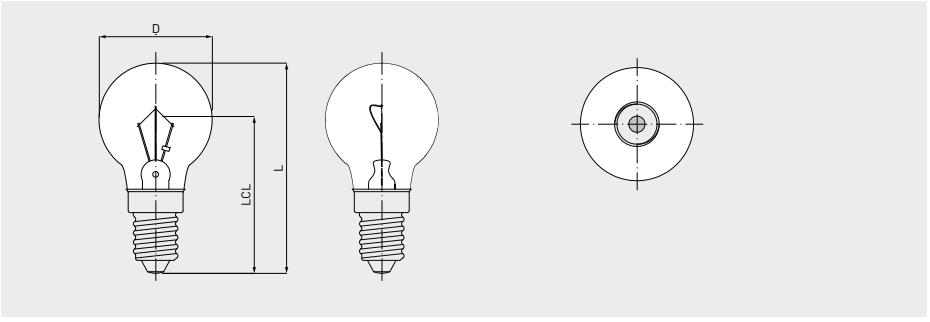
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00825005	12V 15W B22s	12	15		B22s	40	56.5		230	200		S135	



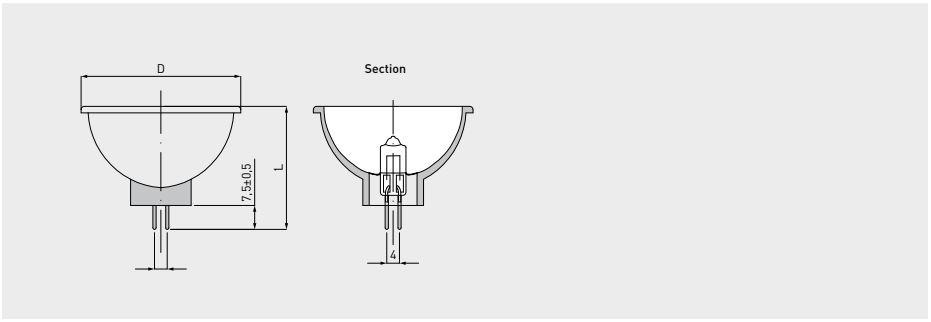
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845321	3.75V 1/1A Ba15d head lamp	3.75		1/1	Ba15d	18.7	36.5	21	30	300			



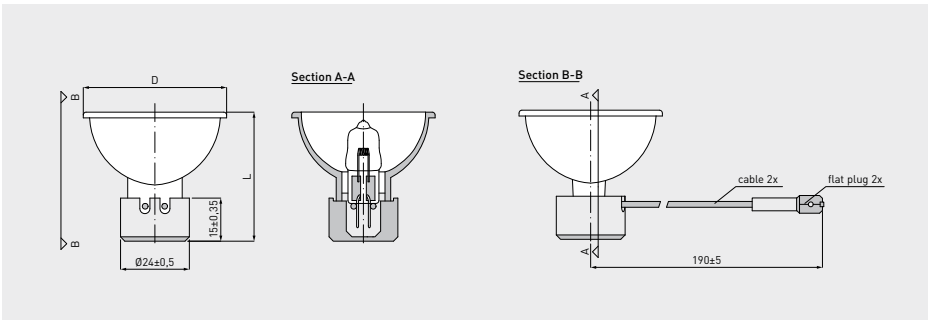
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845293	40V 6W E27 35x62 clear	40	6		E27	35	62						
00845297	42V 7W E14 35x48 clear	42	7		E14	35	65	48					

Lamps for special lighting purposes
Individual applications

For special features, specific benefits and areas of use see page 207



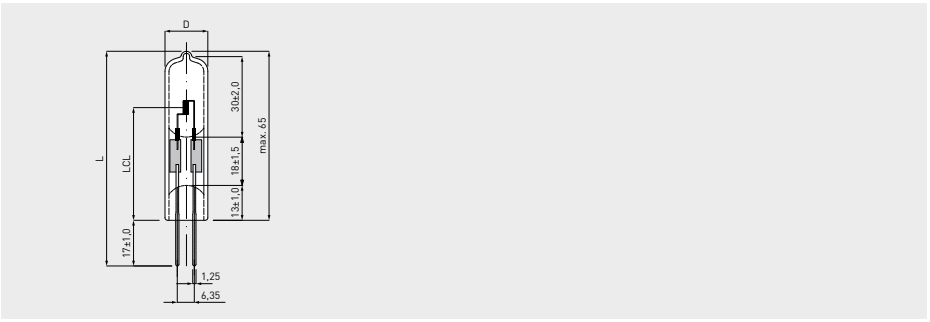
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847046	7V 7W KLS-reflector without frontal glass disc	7	7		Special	35	41						



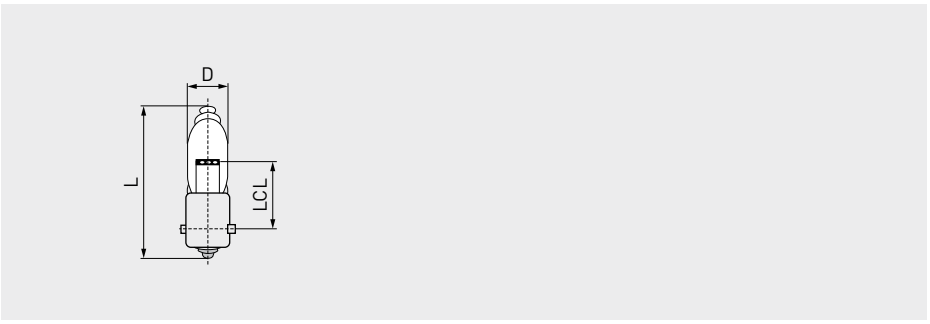
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847101	12V 50W KLS reflector and plug connection 6.3x0.8	12	50		K23d	50			900	2,000			

Lamps for special lighting purposes
Individual applications

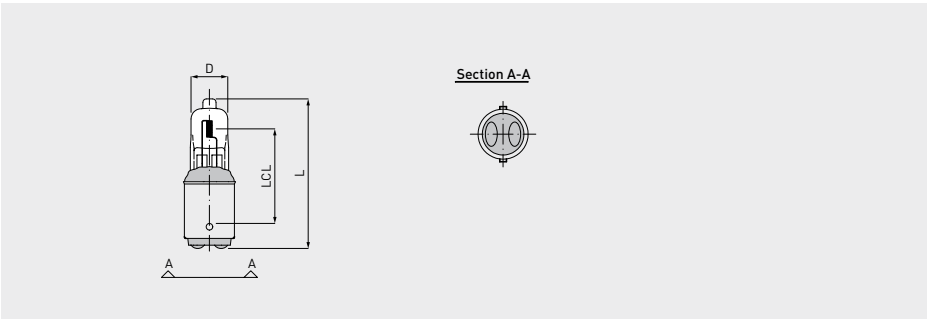
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847146	30V 200W G6.35 short flex clear T16x80	30	200		G6.35	16	80	63	4,500				
00847144	30V 200W G6.35 short flex matt T 16/80	30	200		G6.35	16	80	63	4,500	1,000			



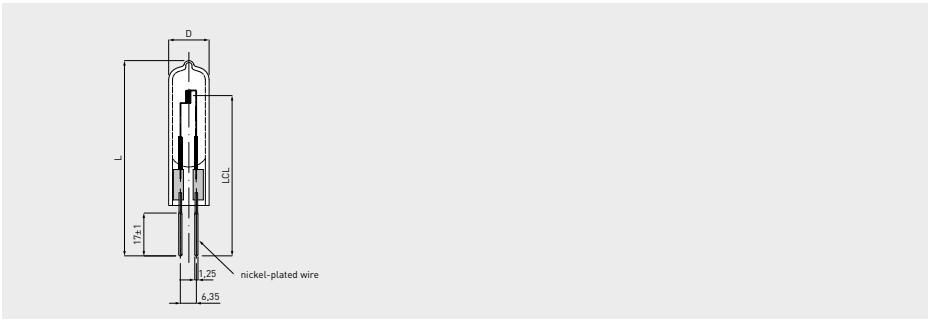
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847149	24V 10W Ba9s T8x30 clear	24	10		Ba9s	10	32	13.5	140	2,000			



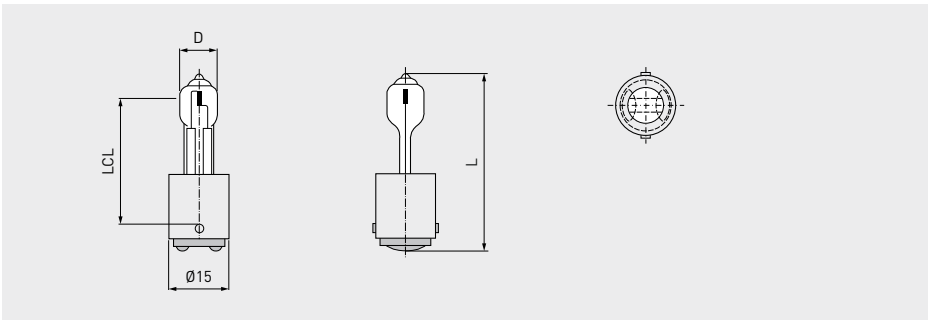
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847152	12V 50W BA15d 11x45 clear	12	50		BA15d	11	45	28.5	950	3,000			

Lamps for special lighting purposes
Individual applications

For special features, specific benefits and areas of use see page 207



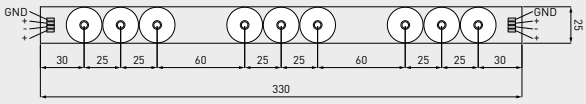
Article no.	Description	V	W	Amperage	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00847610	12V 175W G6.35 T.16x80 clear 3500lm	12	175		G6.35	16.5	80	63	3,500	1,000			
00847611	30V 200W G6.35 T.16x80 clear 4000lm	30	200		G6.35	16.5	80	63	4,000	1,000			
00847612	30V 400W G6.35 T.16x80 clear 8000lm	30	400		G6.35	16.5	80	63	8,000	1,000			



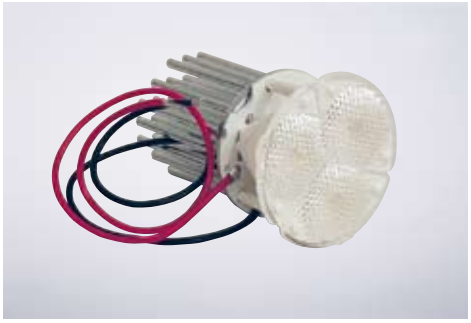
Article no.	Description	V	W	Amperage	Cap	Lampendurchmesser max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
8500003006	Halogen lamp 10.8V 35W BA 15d	10.8	35		BA15d	17	49		525	6,000			
8500003007	Halogen lamp 10.8V 50W BA 15d	10.8	50		BA15d	17	49		780	6,000			
8500003008	Halogen lamp 10.8V 75W BA 15d	10.8	75		BA15d	17	49		1,330	6,000			

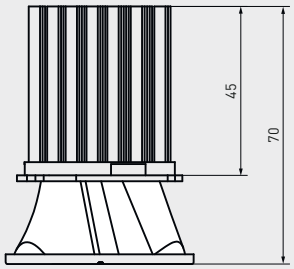
Lamps for special lighting purposes
Individual applications

For special features, specific benefits and areas of use see page 207

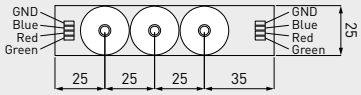


Article no.	Description	V	W	Amperage	Cap	dimensions max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00330001	LED board blue 9x1W (350mA) incl. power source		9	0.35		25 x 330			30,000		any	





Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00330002	LED board blue blau round d=50 Opt.45° 3x1W		3	0.35		50	70			30,000		any	
00330005	LED board green round d=50 Opt.45° 3x1W		3	0.35		50	70			30,000		any	
00330006	LED board warm white round d=50 Opt.45° 3x1W		3	0.35		50	70			30,000		any	
00330007	LED board blue cold white round d=50 Opt.45° 3x1W		3	0.35		50	70			30,000		any	

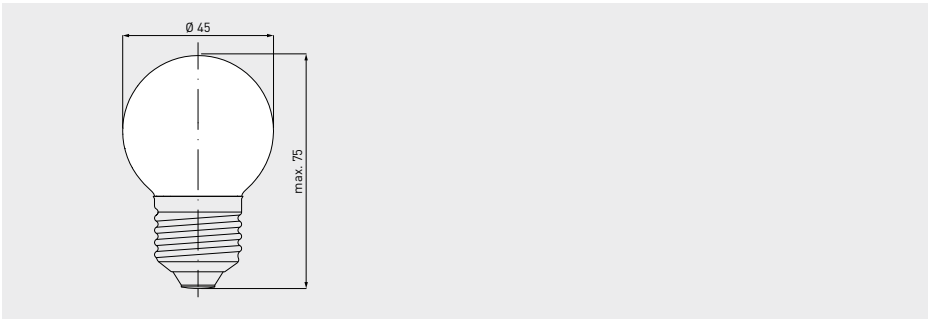


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00330008	LED board blue 3x1W (350mA) incl. power source		3	0.35		50	70			30,000		any	

Lamps for special lighting purposes

Individual applications

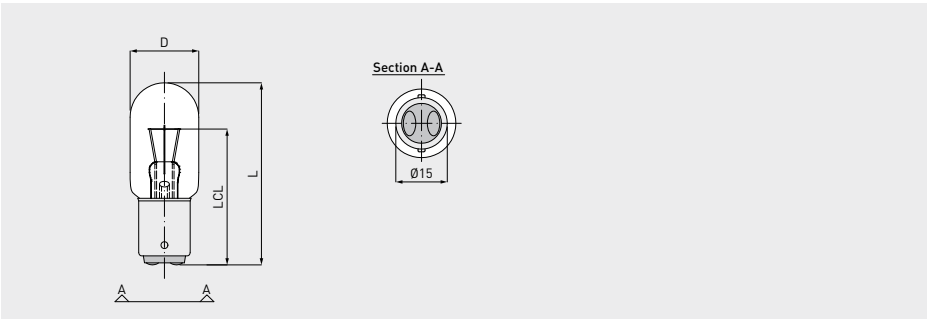
For special features, specific benefits and areas of use see page 207



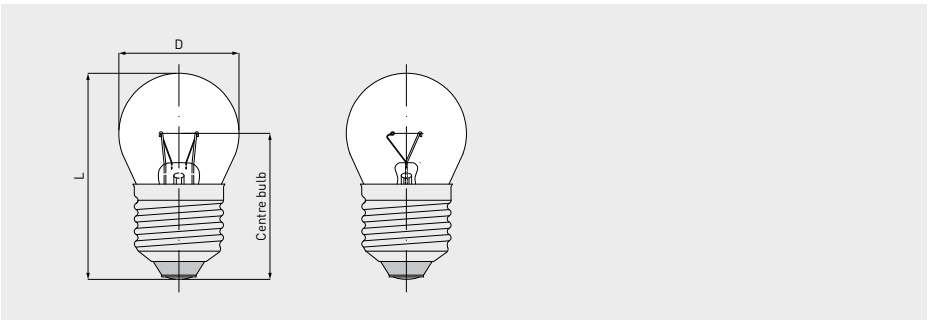
Article no.	Description	V	W	Amperage mA	Cap	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00331201	LED drip lamp G45 230V 1.2W E27 warm white	230	1.2	14	E27	45	75		25	25,000		any	
00331202	LED drip lamp G45 230V 1.2W E27 red	230	1.2	14	E27	45	75		25	25,000		any	
00331203	LED drip lamp G45 230V 1.2W E27 yellow	230	1.2	14	E27	45	75		25	25,000		any	
00331204	LED drip lamp G45 230V 1.2W E27 green	230	1.2	14	E27	45	75		25	25,000		any	
00331205	LED drip lamp G45 230V 1.2W E27 blue	230	1.2	14	E27	45	75		25	25,000		any	

Lamps for special lighting purposes
Individual applications

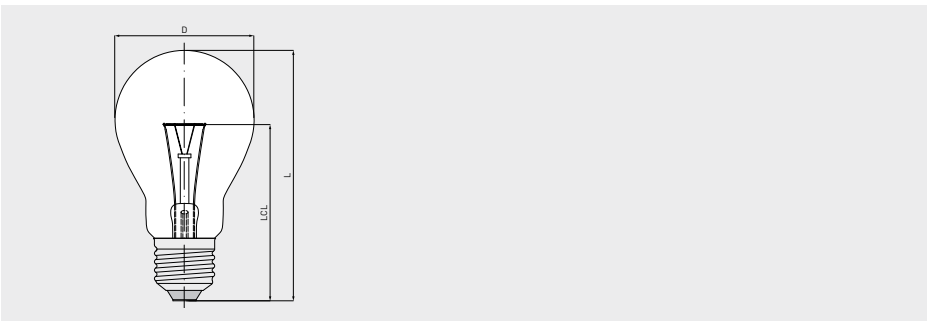
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845276	110V 15W BA15d T.20x53 clear	110	15		BA15d	20	53	Centre bulb	120	1,000			



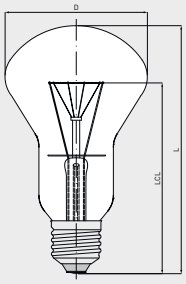
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845314	220V 15W E27 35x60 clear	220	15		E27	36	60	Centre bulb	30	1,000			
00845315	220V 15W E27 35x60 frosted	220	15		E27	36	60	Centre bulb	20	1,000			
00845316	220V 15W E27 30x49 frosted	220	15		E27	31	49	Centre bulb	20	1,000			



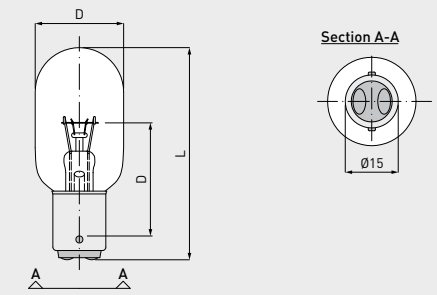
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845310	230V 60W E27 300°C oven	230	60		E27	60	108	75	640	1,000			
00845309	230V 75W E27 300°C oven	230	75		E27	60	108	75	850	1,000			

Lamps for special lighting purposes
Individual applications

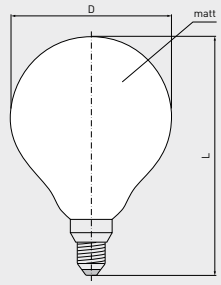
For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845307	240V 200W E27 E75x130 clear	240	200		E27	75	130	100	2,000	8,000			



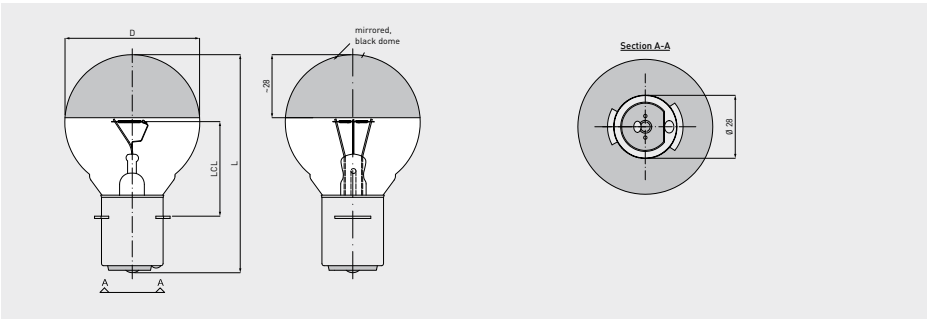
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845266	260V 40W BA15d/19	260	40		BA15d/19	25	64	32					



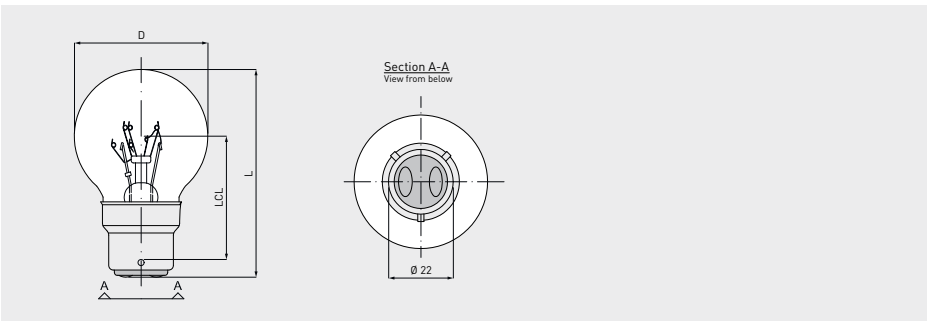
Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h	Burning position	PU
00823132	220V 500W E27	220	500		E27	130	228						
00823133	220V 1000W E27	220	1,000		E27	130	228		20,800	100			

Lamps for special lighting purposes
Individual applications

For special features, specific benefits and areas of use see page 207



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00835317	115V 135W P28s S.60x90 kv	115	135		P28s	60	90	42					



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00845311	300V 11W B22 S.45x70 clear 30lm	300	11		B22s	45	70		30				

Safety voltage

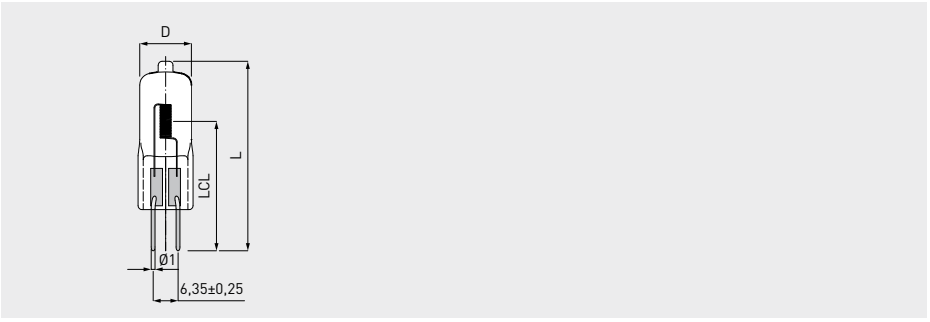
In large constructions (buildings, tunnels) but also on ships, trains and aeroplanes orientation must be possible even when there is power failure. At least the escape routes must always be clearly marked and recognisable. For this reason it is compulsory in many countries to install an emergency lighting system with its own electricity supply, independent of the standard supply.
In addition to illumination of escape routes, this system can also serve as anti-panic lighting and security lighting for hazardous workplaces.
Back-up lighting is also part of safety voltage. It is aimed at guaranteeing that there is enough light so that work can continue for a while even after a power cut. The best known example is the back-up lighting in operating theatres at hospitals.

Safety voltage
Lamps for orientation lights

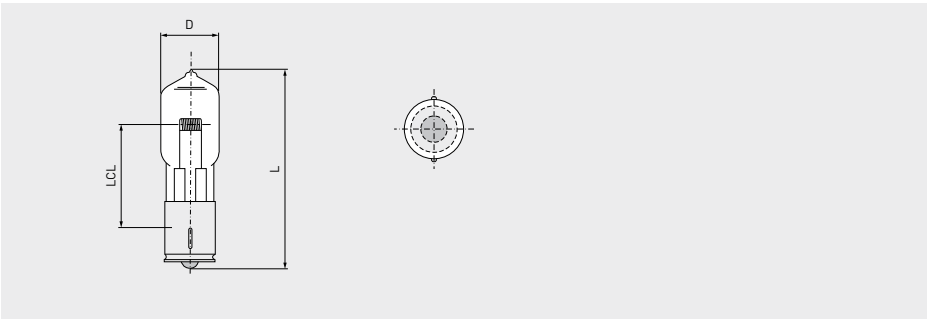
Special features:
- low-voltage halogen lamps
- premium-quality inert gas filling

Specific benefits:
- high resistance to outside influences
- high resistance to shock and vibration

Areas of use:
- orientation lights
- ex lights



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800024100	Halogen lamp 24V 100W	24	100		Gy6.35	12	44	30	2,200	1,000			
8802415000	Halogen lamp 24V 150W	24	150		Gy6.35	14	48	33	3,200	300			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800024207	Halogen lamp 24V 20W BA 7	24	20		BA7	9	32	14	300	2,000			

Safety voltage
Lamps for orientation lights

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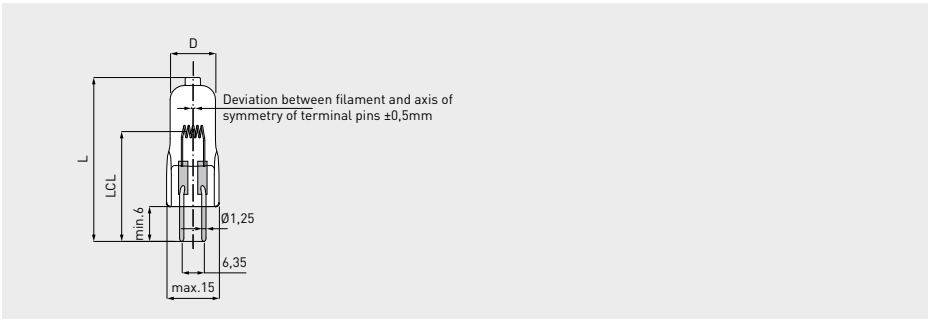
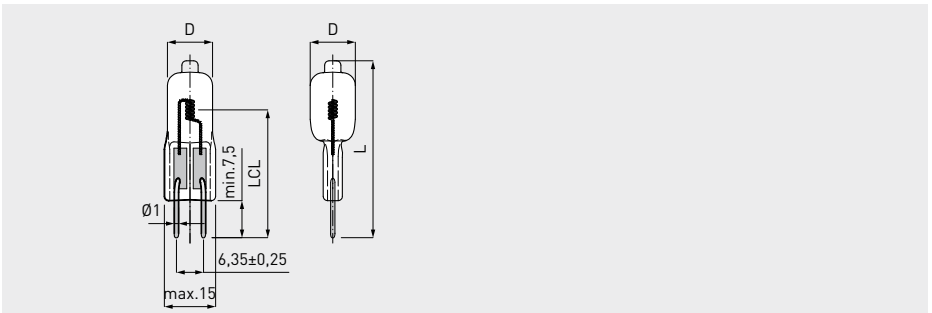
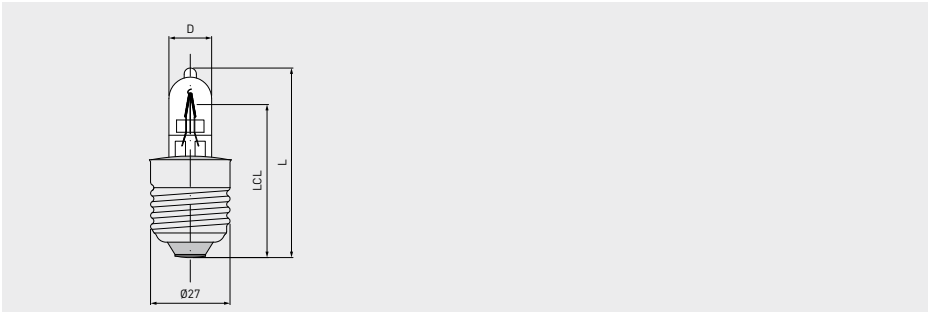


Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800042150	Halogen lamp 42V 150W G 6.35	42	150		G6.35	15	47	31.5	2,800	1,000			



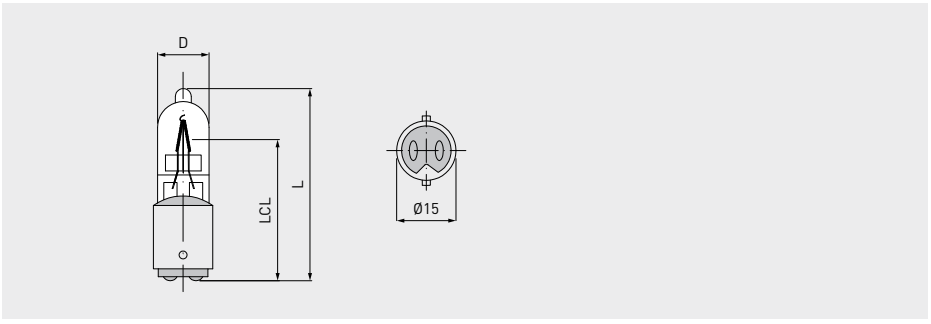
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800247500	Halogen burner 24V 75W G6.35	24	75		Gy6.35	11	44	30	1,200	1,000			
8800245000	Halogen lamp 24V 50W	24	50		Gy6.35	12	44	30	800	1,000			



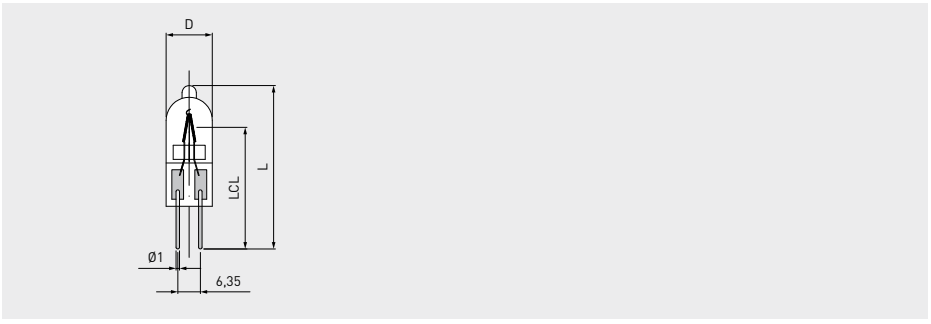
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800247527	Halogen lamp 24V 75W E27	24	75		E27	13	64		1,200	1,000			

Safety voltage
Lamps for orientation lights

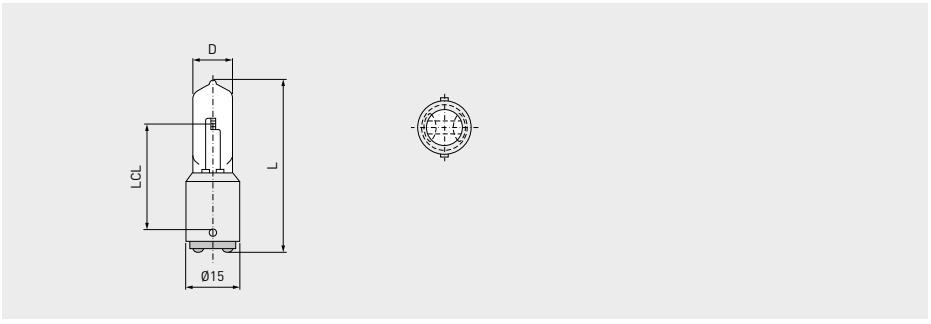
For special features, specific benefits and areas of use see page 223



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800427515	Halogen lamp 42V 75W BA 15d	42	75		BA15d	14	51		1,000	1,000			
8800425015	Halogen lamp 42V 50W BA 15d	42	50		BA15d	14	51		500	1,000			



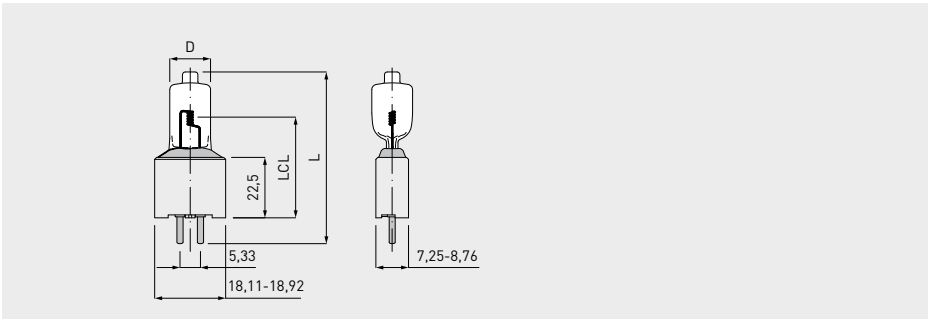
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8800427500	Halogenbrenner 42V 75W pin cap	42	75		Gy635	14	47		1,000	1,000			
8800425000	Halogen lamp 42V 50W pin cap	42	50		Gy6.35	14	47		500	1,000			



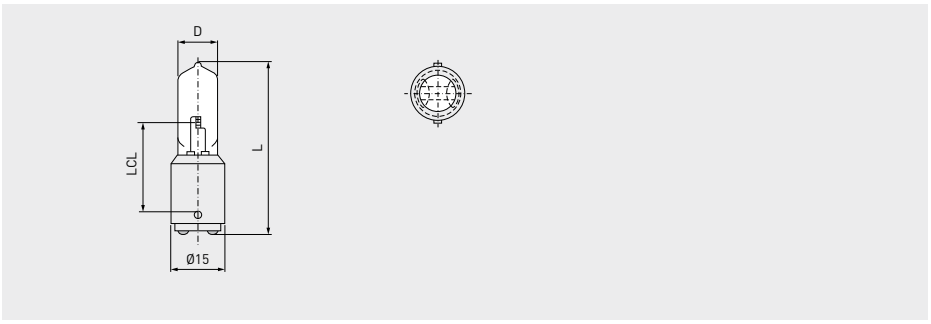
Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8802415015	Halogen lamp 24V 150W BA 15d	24	150		BA15d	14	61	37	3,200	300			
884215015K	Halogen lamp 42V 150W BA15d ceramic	42	150		BA15d	15	61	38	2,800	1,000			

Safety voltage
Lamps for orientation lights

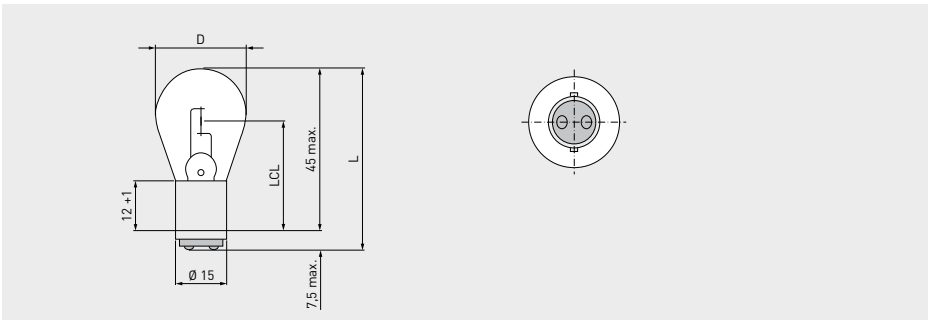
For special features, specific benefits and areas of use see page 223



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
880002470P	Halogen lamp 24V 70W ceramic plug G 5.3	24	70		G5.3	12	46	26	1,400	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
880121015D	Halogen lamp 12V 10W BA 15d	12	10		BA15d	9	45	28	120	2,000			
8800245015	Halogen lamp 24V 50W BA 15d	24	50		BA15d	12	47	28	800	1,000			
8800247515	Halogen lamp 24V 75W BA 15d	24	75		BA15d	12	47	28	1,200	1,000			



Article no.	Description	V	W	Amperage	Cap	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Luminous f ux lm	Average life h	Individual life h	Burning position	PU
00844052	4.8V 8W BA15d	4.8	8		BA15d	26.5	52.5	31.8	120	260		S135	
00124500	12V 45W BA15s	12	45		BA15s	25.5	50	29.5	132	1,000			

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Glossary

Illuminance

Illuminance is the photometric equivalent to irradiance. It is the quotient from an incidental luminous flux on an illuminated surface. The unit is lux (lx). 1 lx is measured when 1 lm evenly contacts a surface area of 1 m².

Individual life

Individual life is the guaranteed operating time up to which fewer than 2 % of the lamps fail.

Colour temperature

Colour temperature is defined as the temperature of a "black body" that belongs to a certain light colour of this source. The unit is Kelvin (K).
In colour photography it is important to take colour temperature into consideration so that a motif can be captured so as to correspond to its natural visual impression. For this reason, films for daylight recording are sensitised in such a way that they provide a colour reproduction that is correct for the human eye at colour temperatures of roundabout 5500 K (average sunlight). Films for artificial light correspond to a colour temperature of 3100 to 3400 K.

Colour reproduction index

The colour reproduction index is a photometric measure with which the colour reproduction of light sources is measure din comparison to a reference light source. For example, to calculate the colour reproduction of a household light bulb, the spectrum of a "black body" with a temperature of 2700 K is used as a reference, and for a fluorescent lamp with a colour temperature of 6500 K, the daylight spectrum of standard light type D65.
When a light source reproduces the visible spectrum of its reference light source perfectly, its colour reproduction index is 100 (spectral elements outside the range of human vision are disregarded since they are imperceptible to the human eye). Standardised test colours are used to calculate the colour reproduction index (DIN 6169). Deviations serve as a measure for the colour reproduction index Ra.

LED

LED, Light Emitting Diode, is an electronic semiconductor component. If current flows forwards through the diode, it will emit light. Multicoloured LEDs consist of several (two or three) diodes in one casing. The principal construction of an LED corresponds to that of a pn semiconductor diode. This means that LEDs have the same basic characteristics as them. One major difference lies in the semiconductor material used. While non-light emitting diodes are made of silicon, or more rarely germanium or selenium, the basic material for LEDs is what is known as a III-V semiconductor, mostly a gallium compound.

Light density

Light density is the photometric measure of what people call brightness, luminosity per given surface area. The brightness of alight source as perceived by the human eye does not necessarily correspond to the physical luminosity. The contrast to the environment or the size of a light source influence physiological perception. A light source with a smaller surface area will be perceived as brighter than one with the same luminosity but a larger surface area. The unit of light density is candela/square metre (cd/m2).
Light density is the measure of the brightness of extended, expanded light sources. The brightness of point-shaped light sources is measured as luminous flux or illuminance.

Light yield

Light yield, measured in lumen/W (lm/W), is the connection between electrical power and luminous flux. The latter depends on the spectral sensitivity of the human eye.
This means that light yield is also a measure of the economic viability of a light source.

Light colour

Light colour is the spectral composition of the light from a light source. Lamps are roughly divided into three groups: warm white, with a temperature below 3300 K, cool white with a temperature of 3300 to 5000 K, and daylight at above 5500 K. But within these groups there can also be variations in colour reproduction.

Luminosity

Luminosity is a characteristic of the light source and does not depend on the distance from the observer. It counts the part of the luminous flux (lumen) that is emitted in a given direction (solid angle). The wavelength-dependent sensitivity of the human eye is taken into account, which means that the luminosity of an infrared power source, which is invisible to the human eye, is zero.
The unit of luminosity is the candela (cd).

Luminous f ux

Luminous flux is the photometric equivalent of the power emitted by a lamp. It takes into account the wavelength-dependent sensitivity of the human eye. The unit for luminous flux is lumen (lm).
Luminous flux can be used to determine the photometric illumination efficiency of a lamp. This describes the ratio of the luminous flux to the energy required to generate it, measured in lm/W.

Average Life

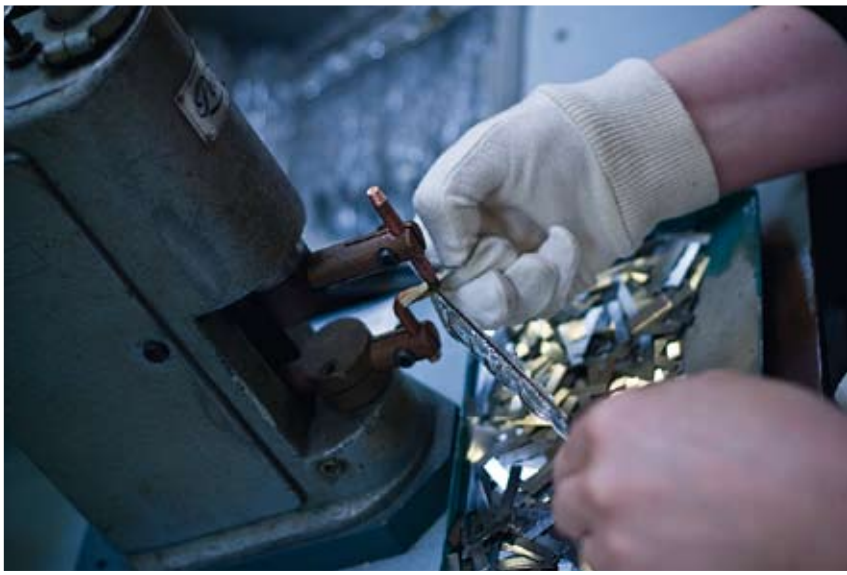
The average life is defined as the time taken for 50% of the lamps to cease functioning. This value is measured by operating a large number of lamps under standard conditions.

Our environment means a lot to us

As a company that belongs to the electronics industry, we have a direct responsibility to ensure sustained ecological development. The more energy-efficient our products become, the better it is for the environment and the climate. For this reason we consider ecological aspects right from the development stage.
We plan, develop, manufacture and sell our products in such a way that the environment is protected and natural resources spared. We pay particular attention to the use of raw materials, the energy balance between production, administration and sales and the planning of the environmentally friendly recycling of our products.

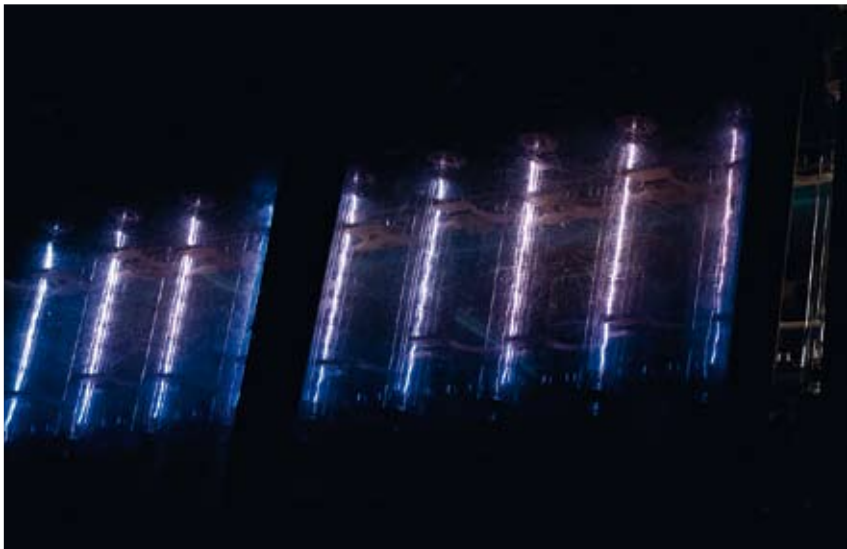
Special lamps are our core competence. We continue to make successful efforts to increase energy efficiency. This not only includes direct light yield, but also the length of product life. This is both an ecological and an economic argument in terms of quality and competition especially with lamps that must work reliably under heavy conditions.











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