



DR. FISCHER
Group

General catalogue 2010 / 2011





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 all 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 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 München 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 field 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.

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



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





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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 cities 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

Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Special features:

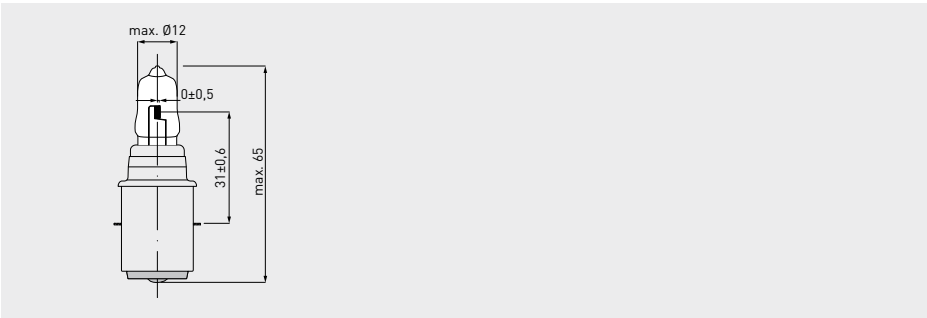
- high-quality materials (quartz glass burner, inert gas filling)
- precision of manufacture, minimum tolerances in the positioning of the filaments
- permanent regeneration of the filaments in the halogen cycle
- stainless steel sockets with TIG welding (nickel-plated brass with conventional solder 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	Socket	Bulb diameter	Total length	Light center length	Luminous flux	Average life	Individual life	Burning position	PU
					max. mm	max. mm	mm	lm	h	h (<2% malfunction)		
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:

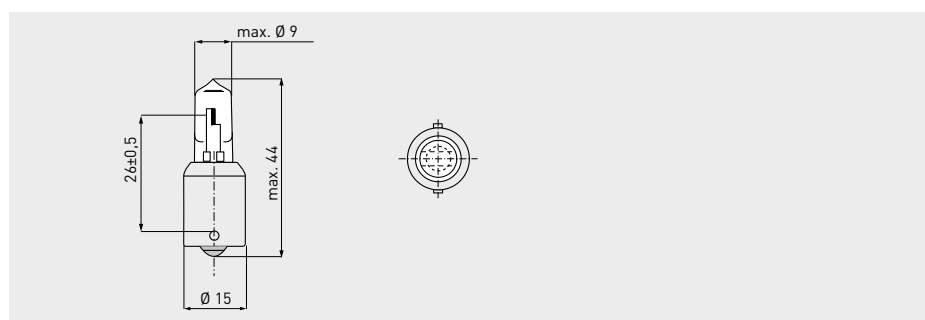
- high-quality materials (quartz glass burner, inert gas filling)
- precision of manufacture, minimum tolerances in the positioning of the filaments
- permanent regeneration of the filaments in the halogen cycle

Specific benefits:

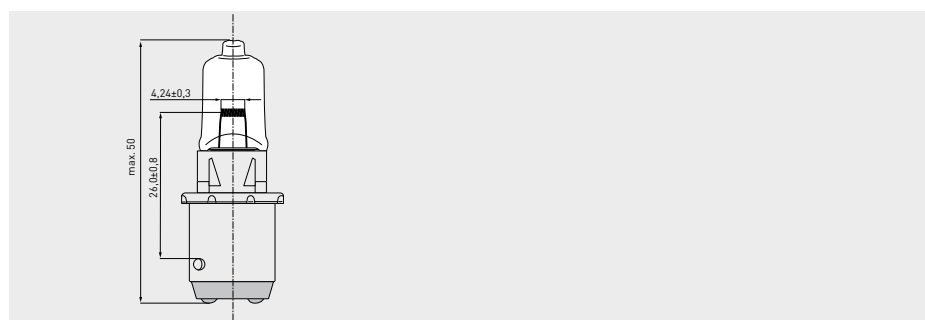
- longer life, meaning longer intervals between changing and lower maintenance costs
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature and other outside influences

Areas of use:

- stationary traffic lights
- mobile traffic lights



Article no.	Description	V	W	Socket	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
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			

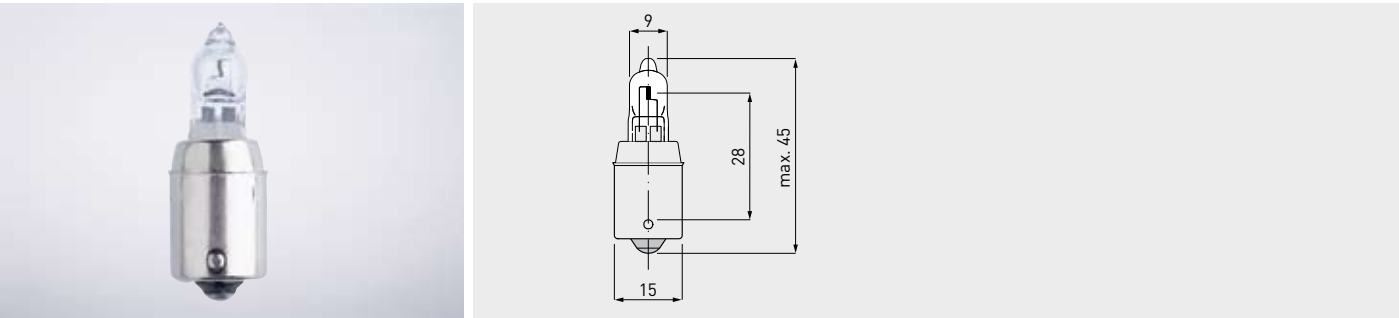


Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
60006613	10V 35W BA15d	10	35	BA15d	11.5	50	26	525	6,000	2,400	S135	100
60013557	10V 50W BA15d	10	50	BA15d	11.5	50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

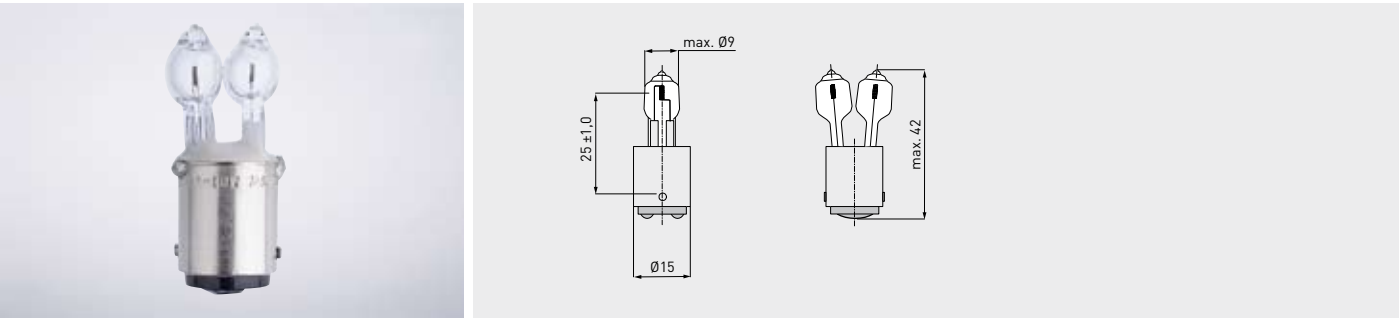
Halogen Lamps

For road traffic lights

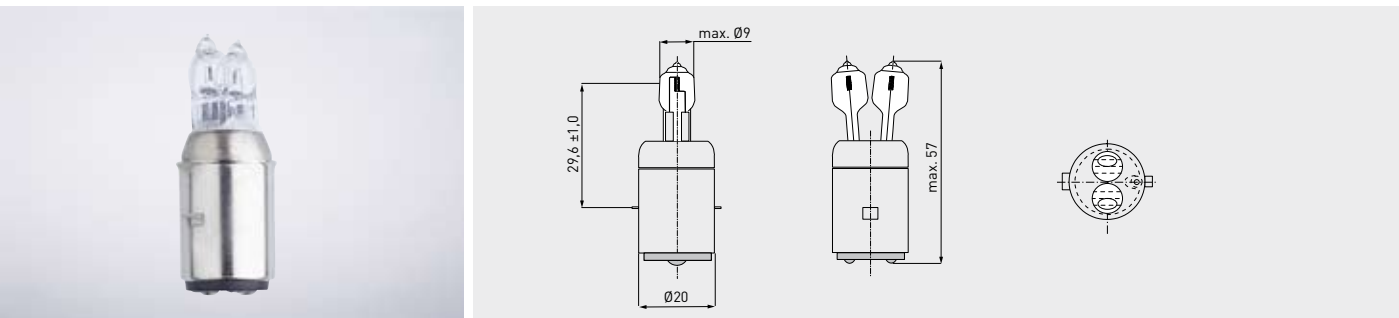
For special features, specific benefits and areas of use see page 15



Article no.	Description	V	W	Socket	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
8400121015	12V 10W BA15s	12	10	BA15s	9	45	28	120	2,000			



Article no.	Description	V	W	Socket	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
8412101015	12V 10/10W BA 15d	12	10	BA15d	9	42	25	120	2,000			

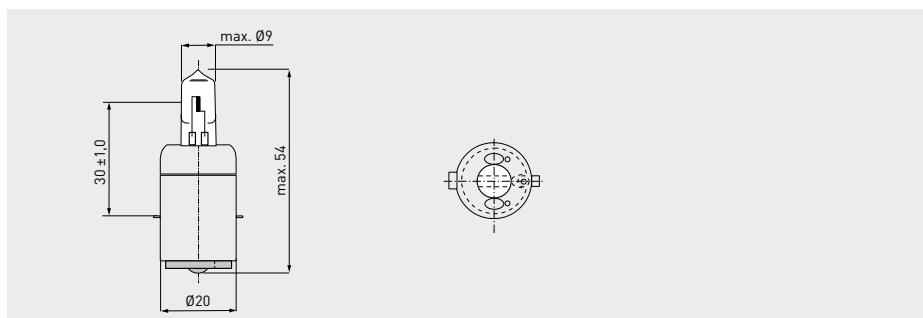


Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8412101020	12V 10/10W BA 20d	12	10/10	BA20d	9	57	29.6	120	2,000			

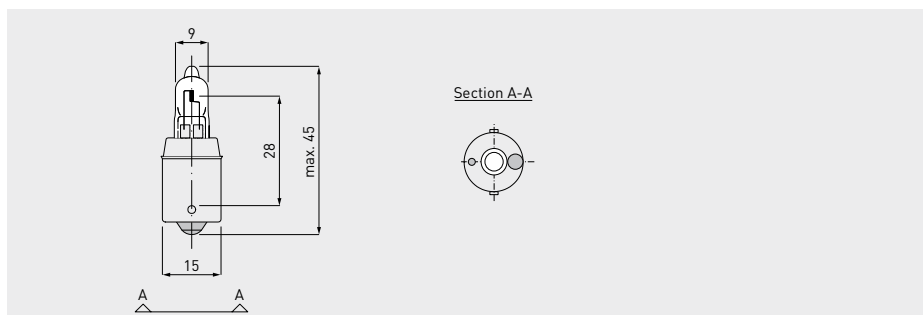
Halogen Lamps

For road traffic lights

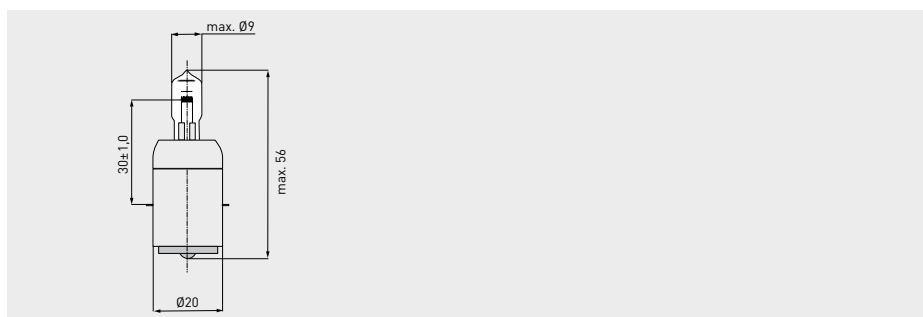
For special features, specific benefits and areas of use see page 15



Article no.	Description	V	W	Socket	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
8400122020	12V 20W BA 20d	12	20	BA20d	9	54	30	360	1,000			



Article no.	Description	V	W	Socket	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
8400122015	12V 20W BA 15s	12	20	BA15s	9	45	28	360	1,000			

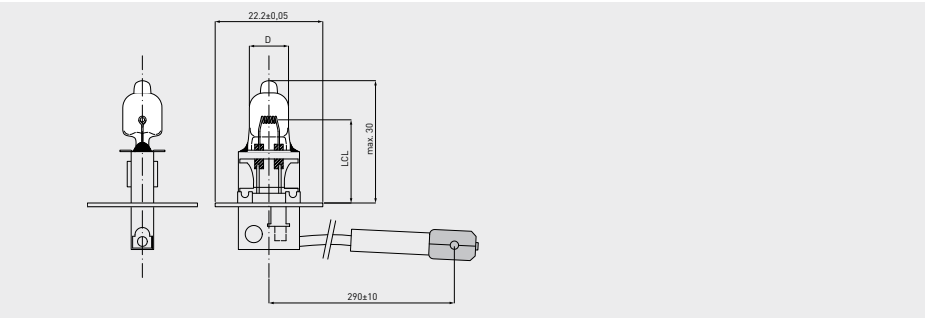


Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
8400242020	24V 20W BA 20d	24	20	BA20d	9	56	30	280	2,000			
8424202000	24V 20W BA20S	24	20	BA20s	9	56	30	280	2,000			

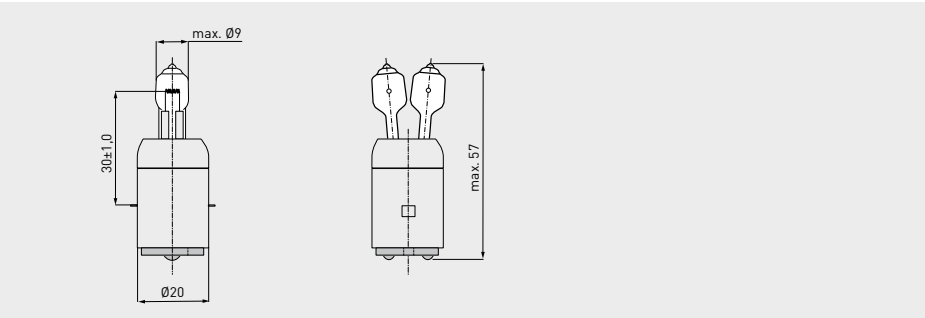
Halogen Lamps

For road traffic lights

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



Article no.	Description	V	W	Socket	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
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	Socket	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
8424202020	24V 20/20W BA 20d	12	20	BA20d	9	57	30	300	2,000			

Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Halogen cold mirror reflector lamps

For variable message signs on roads

Special features:

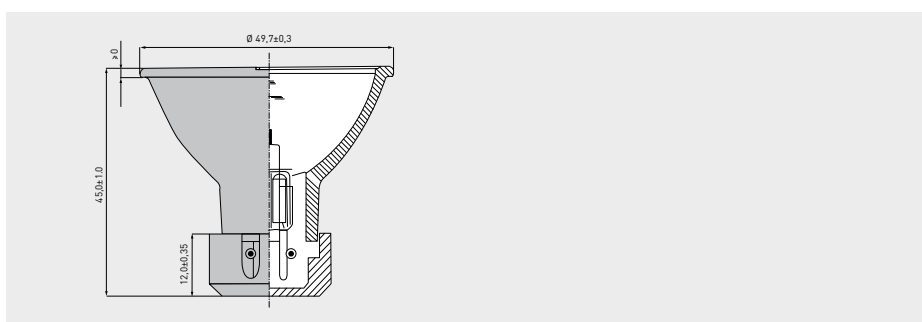
- high-quality materials (quartz glass burner, inert gas filling)
- precision of manufacture, minimum tolerances in the positioning of the filaments
- permanent regeneration of the filaments in the halogen cycle
- 10V 48W also available as long-life (15,000 hours average life)
- flexible connections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

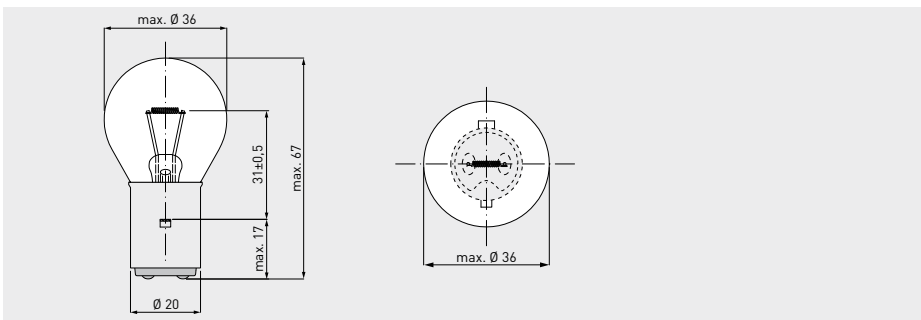
- 6-month or 12-month lamps available (4,400 or 8,800 hours individual life)
- also available as a heavy-duty version
- compact filament body
- corrosion-proof, nickel-plated brass socket

Specific benefits:

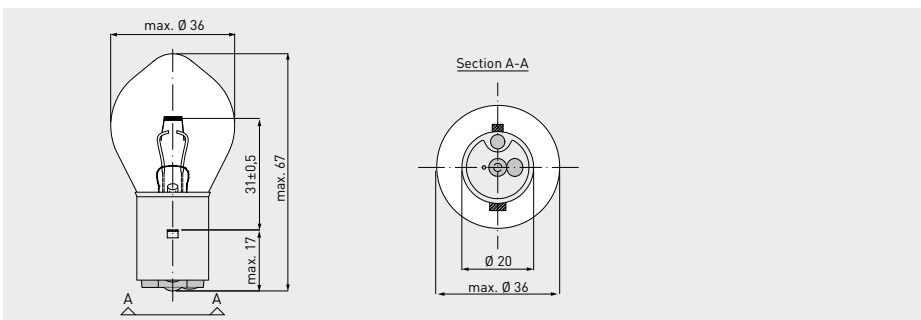
- reduced maintenance costs as compared to 230-volt standard lamps
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature, shock and vibration
- can be used to convert from high-voltage to low-voltage technology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

Areas of use:

- stationary traffic lights
- mobile traffic lights



Article no.	Description	V	W	Socket	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

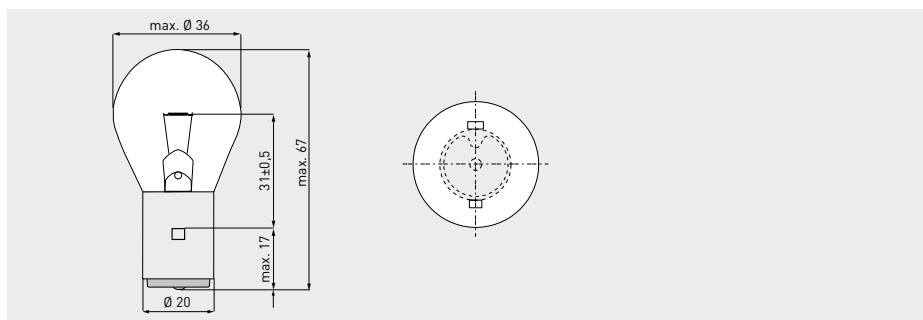


Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842237	10V 20W BA20s	10.5	22	BA20s	36	67	31	270	6,000	4,400	S135	200
00842238	10V 30W BA20s	10.5	30	BA20s	36	67	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

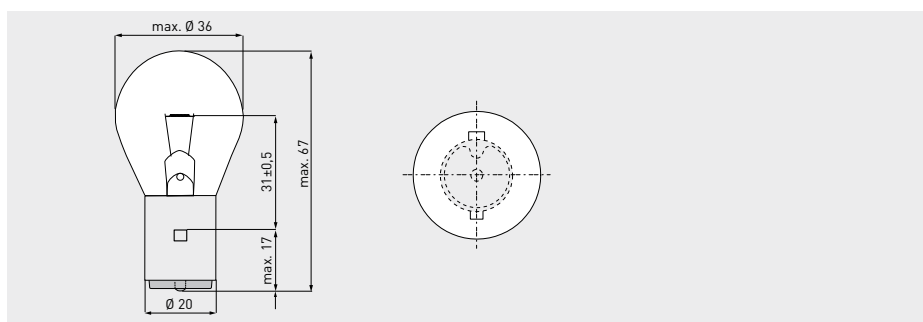
Excess pressure lamps

For road traffic lights

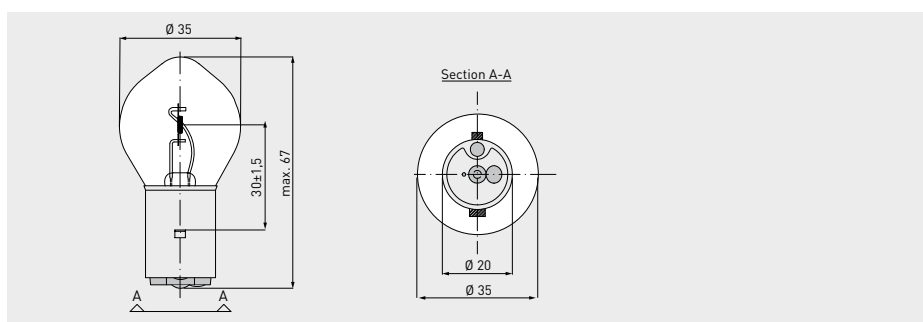
For special features, specific benefits and areas of use see page 20



Article no.	Description	V	W	Socket	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
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	Socket	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
00842442	12V 27W BA20s hook welding	12	27	BA20s	36	67	31	375	1,500		S135	200

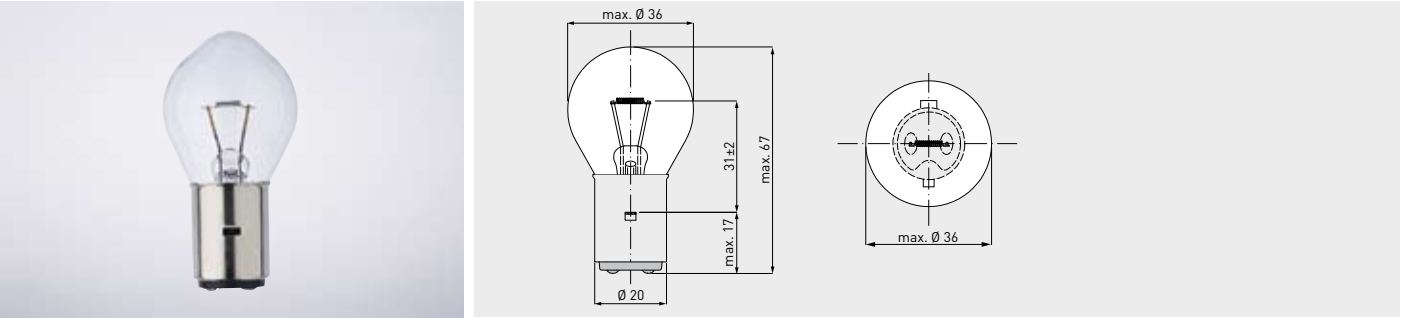


Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842526	12V 27W BA20s axial	12	27	BA20s	35	67	30	390	4,400 at 10.5 V		S135	200

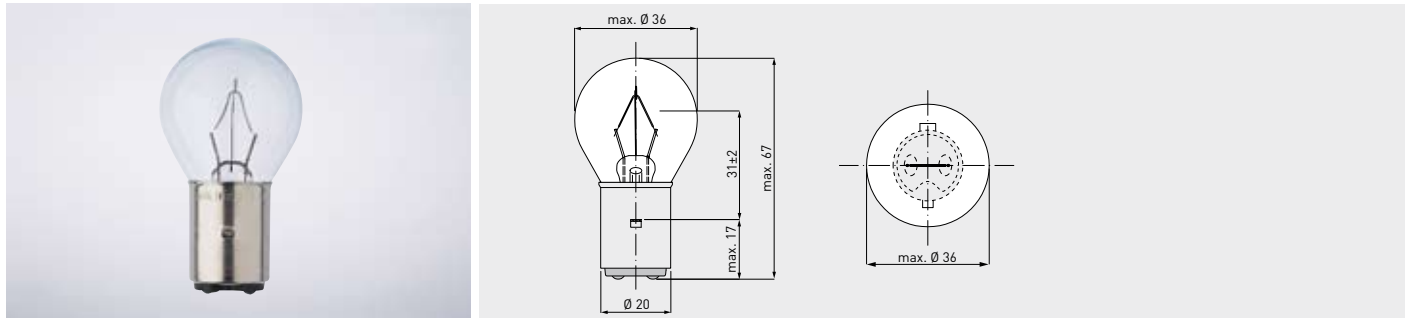
Excess pressure lamps

For road traffic lights

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



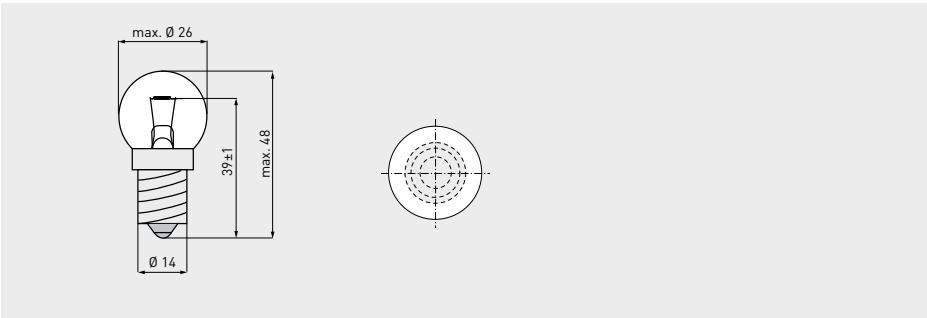
Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842077	40V 25W BA20d	40	25	BA20d	36	67	31	250	8,000	4,400	S135	200
00842078	40V 40W BA20d	40	40	BA20d	36	67	31	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	Socket	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
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	Socket	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
00842354	30V 15W E14	30	15	E14	26	48	39	95	2,000		S135	



Article no.	Description	V	W	Socket	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
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



Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Excess pressure lamps with dual-filament technology

For road traffic lights



Excess pressure lamps with dual-filament technology

For road traffic lights

Special features:

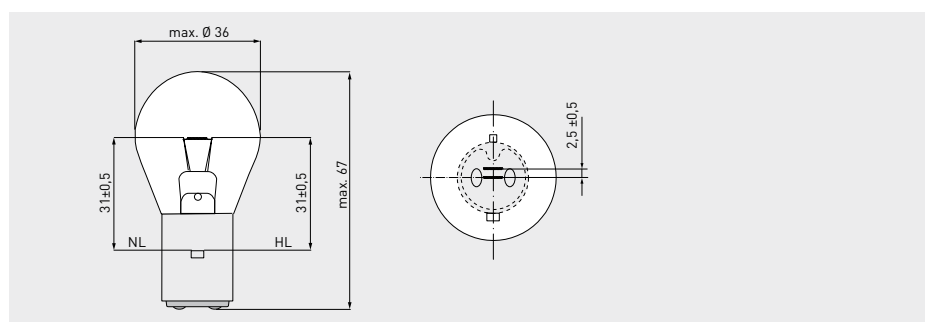
- 6-month lamps (4,400 hours individual life) available
- compact dual-filament version for automatic switching to auxiliary filament if the main filament malfunctions
- corrosion-proof, nickel-plated brass socket

Specific benefits:

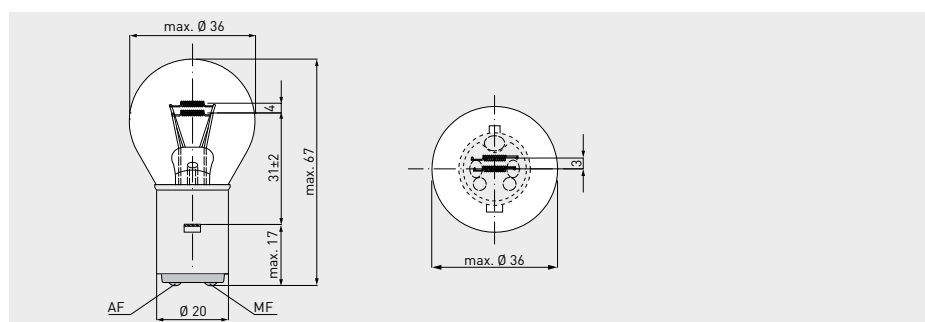
- reduced maintenance costs as compared to 230-volt standard lamps
- high traffic safety on account of the auxiliary filaments
- high, virtually constant luminous flux throughout their entire lives
- high filament stability, which means very good resistance to temperature and other outside influences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

Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Special features:

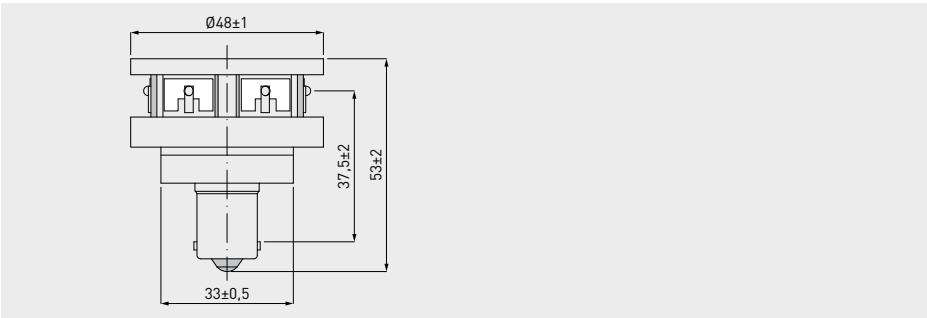
- available in red, amber and green
- non-sensitive, even with many cycles of operation
- very long life: 30,000 h = 20 times longer than conventional lamps
- BA15d nickel-plated brass socket (or other versions)
- best possible distribution of light by means of a central light source, guaranteeing an 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	Socket	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
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:

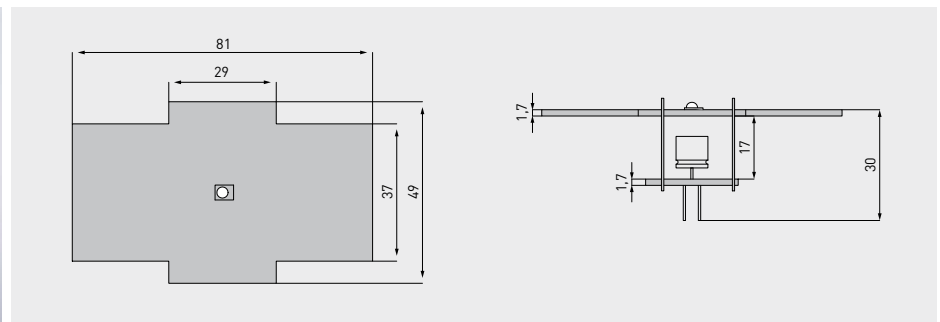
- low maintenance costs
- easy to assemble
- low self-heating
- brand-quality LED from Lumileds

Specific benefits:

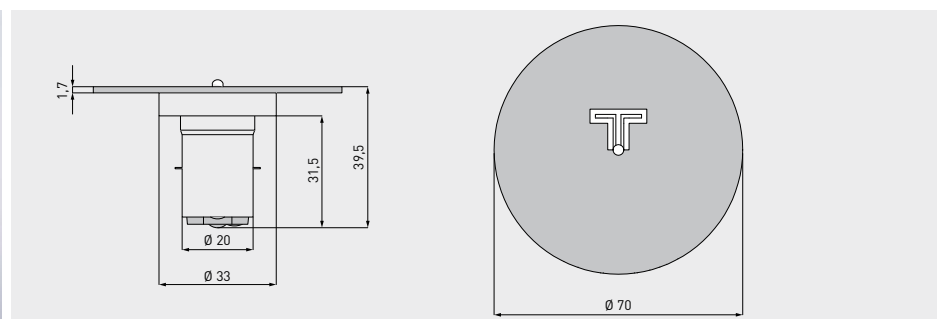
- Energy saving by higher efficiency
- resistance to many cycles of operation
- 1:1 exchange for incandescent or halogen lamps
- long life compared to incandescent and halogen lamps

Areas of life:

- suitable for traffic lights without current monitoring



Article no.	Description	V	W	Socket	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
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	Socket	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
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

- Traffic signal lamps
- Special features:

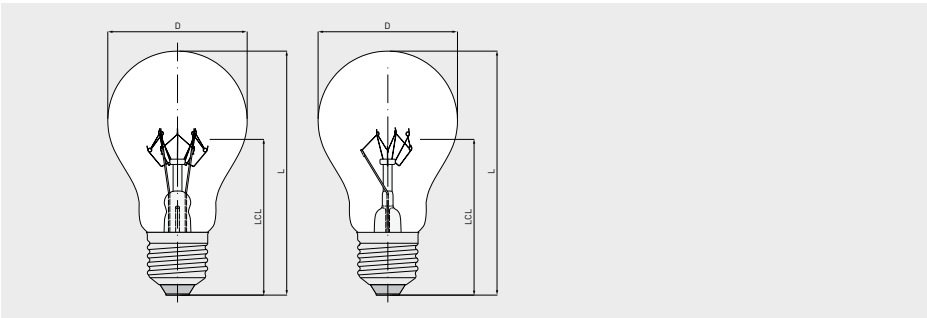
 - precision of manufacture, minimum tolerances in the positioning of the filaments
 - 9-supporter for the filaments
 - krypton filling or vacuum version; both with premium quality getters
 - corrosion-proof, nickel-plated brass socket

- Specific benefits:

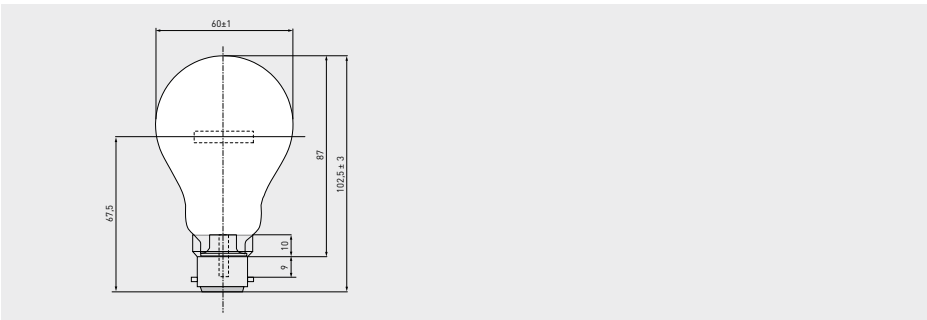
 - easy to change lamps
 - high luminous flux
 - high resistance to shock and vibration
 - must be replaced every 8-9 months, meaning reduced maintenance costs compared to high-voltage standard lamps

- Areas of use:

 - stationary traffic lights



Article no.	Description	V	W	Socket	Bulb diameter D max. mm	Total length L max. mm	Light center length LCL mm	Luminous flux 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	1 / 60
8257 060 44460	235V 60W clear E27	235	60	E27	61	107	69	405	15,000	6,000	S90	1 / 60
8257 075 44460	235V 75W clear E27	235	75	E27	61	107	69	520	15,000	6,000	S90	1 / 60
8357 100 44440	235V 100W clear E27	235	100	E27	66	118	80	750	15,000	6,000	S90	1 / 60

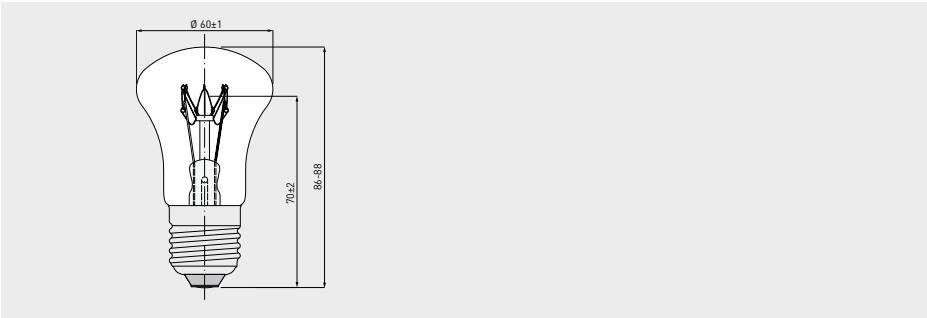


Article no.	Description	V	W	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous flux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
8257 041 44460	235V 40W clear B22	235	40	B22	61	107	69	230	15,000	6,000	S90	1 / 60
8257 061 44460	235V 60W clear 22	235	60	B22	61	107	69	405	15,000	6,000	S90	1 / 60
8257 076 44460	235V 75W clear B22	235	75	B22	61	107	69	520	15,000	6,000	S90	1 / 60
8357 101 44440	235V 100W clear B22	235	100	B22	66	118	80	750	15,000	6,000	S90	1 / 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	Socket	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
8757 040 44460	235V 40W clear E27	235	40	E27	61	92	69	230	15,000	6,000	S90	1 / 60
8757 060 44460	235V 60W clear E27	235	60	E27	61	92	69	405	15,000	6,000	S90	1 / 60
8757 075 44460	235V 75W clear E27	235	75	E27	61	92	69	520	15,000	6,000	S90	1 / 60
8757 100 44460	235V 100W clear E27	235	100	E27	61	102	79	750	15,000	6,000	S90	1 / 60



Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

8,000 h lamps

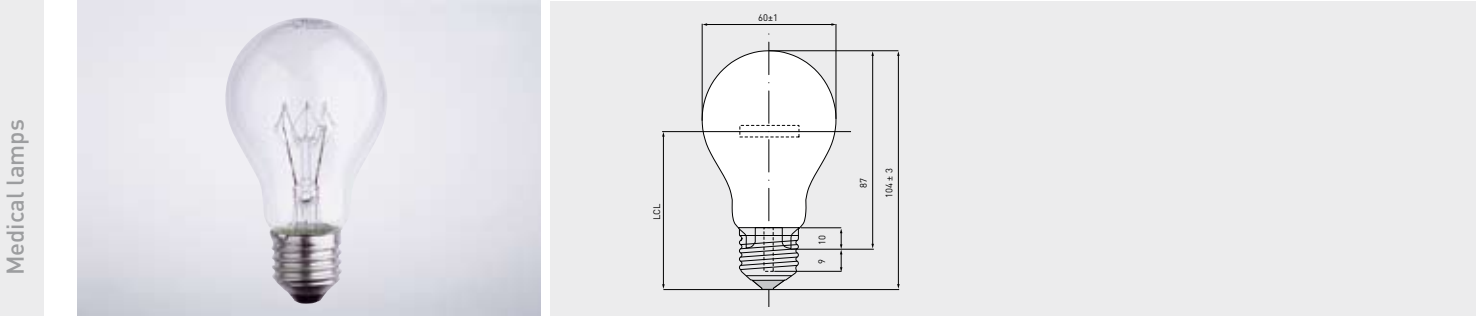
For road traffic lights

- Traffic signal lamps
- Special features:

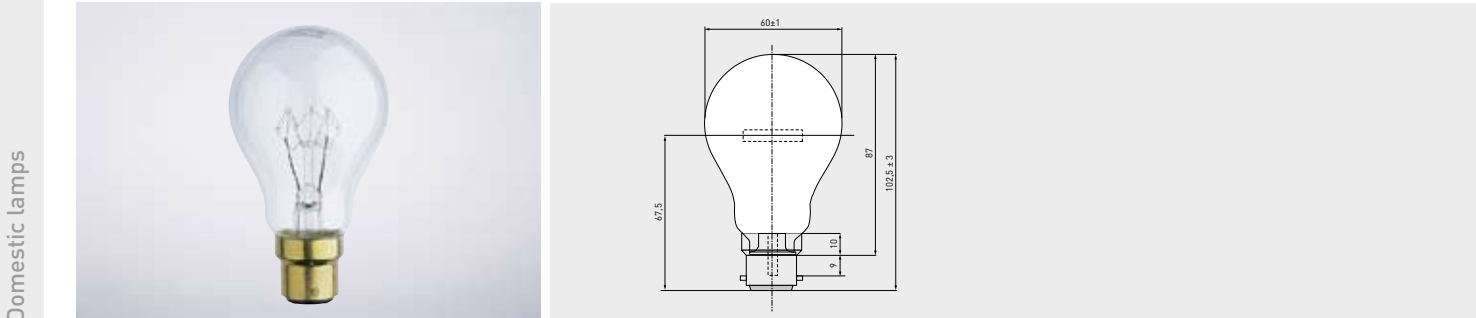
 - precision of manufacture, minimum tolerances in the positions of the filaments
 - corrosion-proof, nickel-plated brass socket

- 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	Socket	Bulb diameter	Total length	Light center length	Luminous flux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
					max. mm	max. mm	mm					
8247 040 33660	130V 40W clear E27	130	40	E27	61	107	69	290	8,000	3,000	S90	1/ 60
8247 060 33660	130V 60W clear E27	130	60	E27	61	107	69	400	8,000	3,000	S90	1/ 60
8247 075 33660	130V 75W clear E27	130	75	E27	61	107	69	600	8,000	3,000	S90	1/ 60
8247 100 33660	130V 100W clear E27	130	100	E27	66	118	80	800	8,000	3,000	S90	1/ 60
8247 040 44460	235V 40W clear E27	235	40	E27	61	107	69	230	8,000	3,000	S90	1/ 60
8247 060 44460	235V 60W clear E27	235	60	E27	61	107	69	405	8,000	3,000	S90	1/ 60
8247 075 44460	235V 75W clear E27	235	75	E27	61	107	69	540	8,000	3,000	S90	1/ 60
8247 100 44460	235V 100W clear E27	235	100	E27	66	118	80	840	8,000	3,000	S90	1/ 60

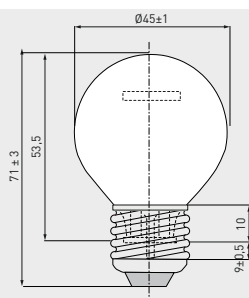


Article no.	Description	V	W	Socket	Bulb diameter	Total length	Light center length	Luminous flux lm	Average life h	Individual life h (<3% malfunction)	Burning position	PU
					max. mm	max. mm	mm					
8247 041 33660	130V 40W clear	130	40	B22	61	107	69	290	8,000	3,000	S90	1/ 60
8247 061 33660	130V 60W clear	130	60	B22	61	107	69	400	8,000	3,000	S90	1/ 60
8247 076 33660	130V 75W clear	130	75	B22	61	107	69	600	8,000	3,000	S90	1/ 60
8247 101 33660	130V 100W clear	130	100	B22	66	118	80	800	8,000	3,000	S90	1/ 60
8247 041 44460	235V 40W clear	235	40	B22	61	107	69	230	8,000	3,000	S90	1/ 60
8247 061 44460	235V 60W clear	235	60	B22	61	107	69	405	8,000	3,000	S90	1/ 60
8247 076 44460	235V 75W clear	235	75	B22	61	107	69	540	8,000	3,000	S90	1/ 60
8247 101 44460	235V 100W clear	235	100	B22	66	118	80	840	8,000	3,000	S90	1/ 60

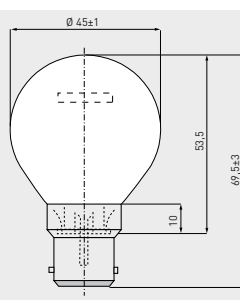
8,000 h lamps

For road traffic lights

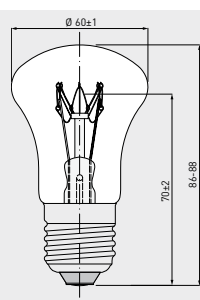
For special features, specific benefits and areas of use see page 30



Article no.	Description	V	W	Socket	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
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	Socket	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
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	Socket	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
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

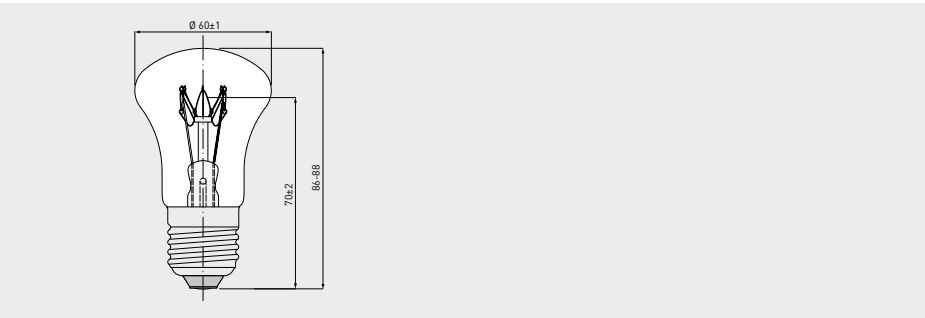
For road traffic lights

- Special features:

 - corrosion-proof, nickel-plated brass socket
- 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	Socket	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
8845 040 33602	130V 40W clear E27	130	40	E27	51	88	70		8,000	3,000	S90	1 / 200
8845 060 33602	130V 60W clear E27	130	60	E27	51	88	70		8,000	3,000	S90	1 / 200
8845 075 33602	130V 75W clear E27	130	75	E27	51	88	70	500	8,000	3,000	S90	1 / 200
8845 040 44402	235V 60W clear B22	235	40	B22	51	88	70		8,000	3,000	S90	1 / 200
8845 060 44402	235V 75W clear B22	235	60	B22	51	88	70		8,000	3,000	S90	1 / 200
8845 075 44402	235V 100W clear B22	235	75	B22	51	88	70		8,000	3,000	S90	1 / 200

Vehicle lamps
For special vehicle lighting

Special features:

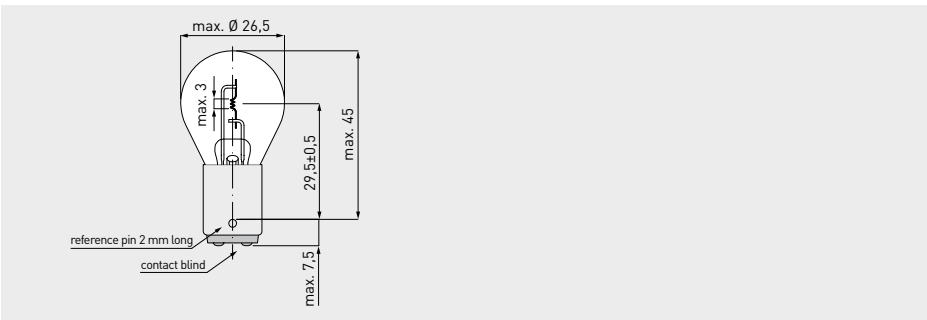
- lamps with a BAX15d socket fulfil DIN 72601 for motor vehicles
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- BAX (automotive) socket

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



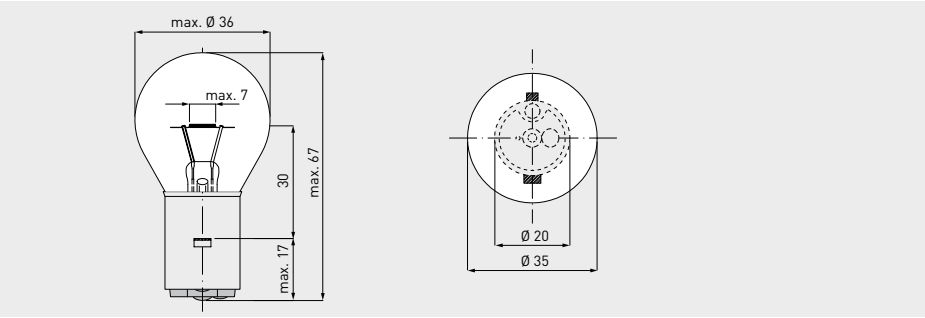
Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00161500	6V 15W BAX15d	6	15		BAX15d	26.5	52.5	29.5	210	min. 100			
00121500	12V 15W BAX15d	12	15		BAX15d	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			



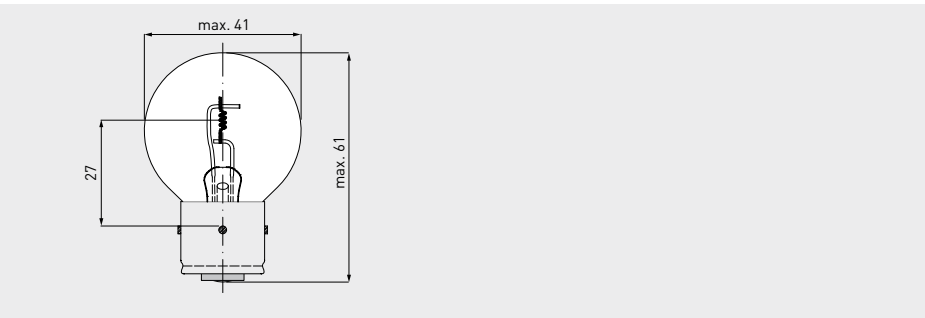
Vehicle lamps

For special vehicle lighting

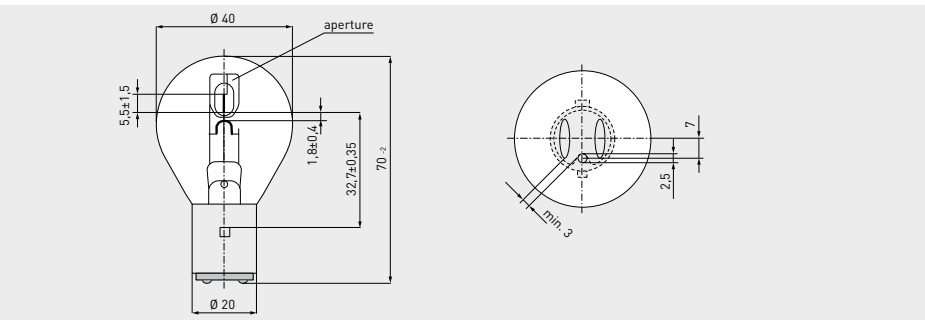
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Am- perage	Socket	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
00123500	12V 35W BA20s	12	35		BA20s	36	67	30	685	100			



Article no.	Description	V	W	Am- perage	Socket	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
00844077	12V 45W BA21s3	12	45		BA21s	41	61	27	500	1,000			

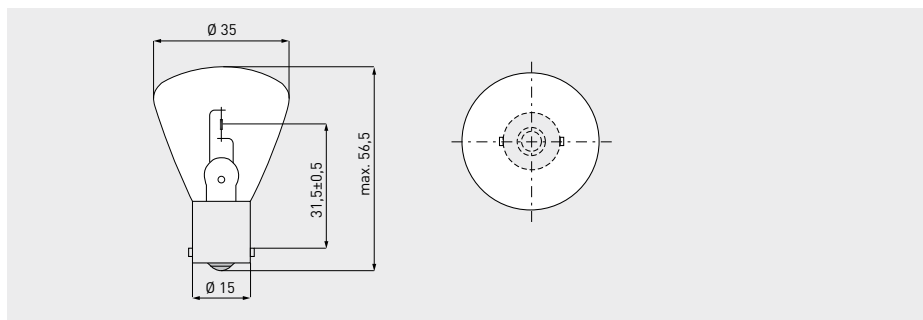


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00945114	12V 50/50W BA20d	12	50/50		Ba20d	40	70	32.7	840/900	70/100			
00945113	24V 50/50W BA20d	24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

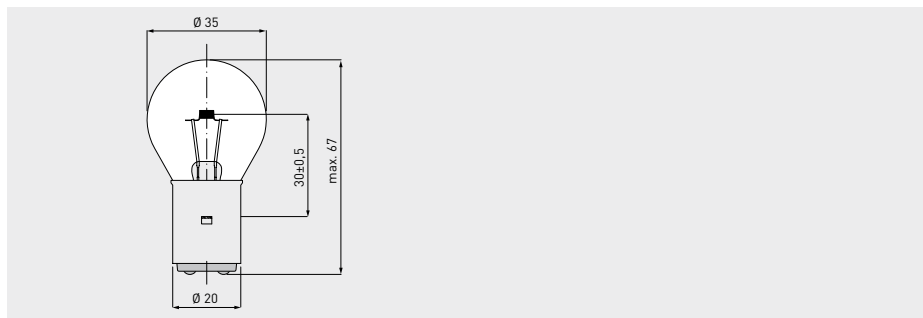
Vehicle lamps

For special vehicle lighting

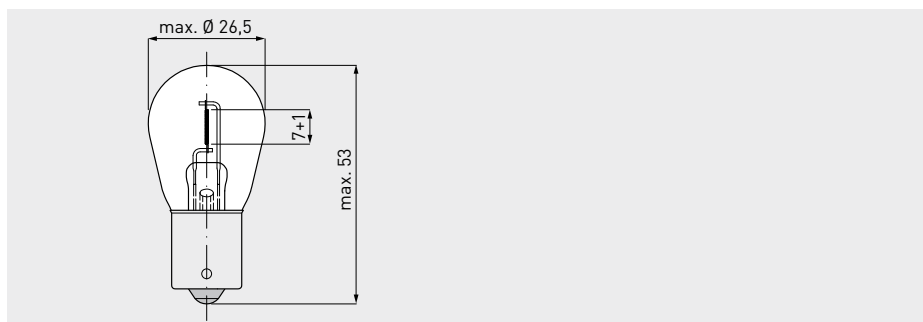
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light center length	Lumi- nous flux lm	Average life	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	Am- perage	Socket	Bulb diameter	Total length	Light center length	Lumi- nous flux lm	Average life	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	Am- perage	Socket	Bulb diameter	Total length	Light center length	Lumi- nous flux lm	Average life	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			

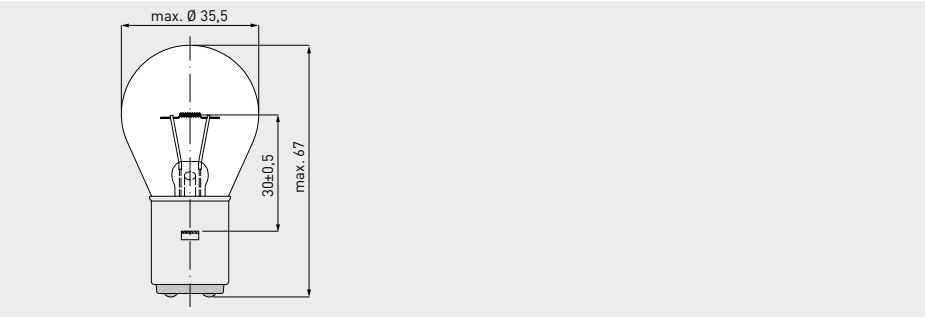
Vehicle lamps

For special vehicle lighting

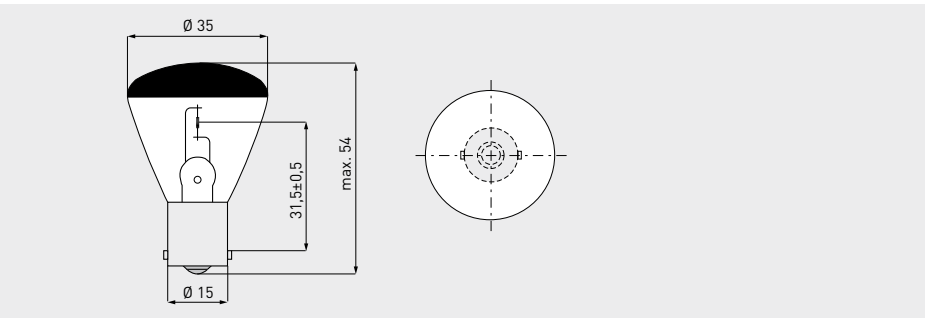
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Am- perage	Socket	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
00844079	24V 250W E27 80x121	24	250		E27	80	121		4,200	100		S135	



Article no.	Description	V	W	Am- perage	Socket	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
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	Am- perage	Socket	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
00143600	24V 35W BA15s with black cap	24	35		BA15s	36	54	31.5	500	75			

Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

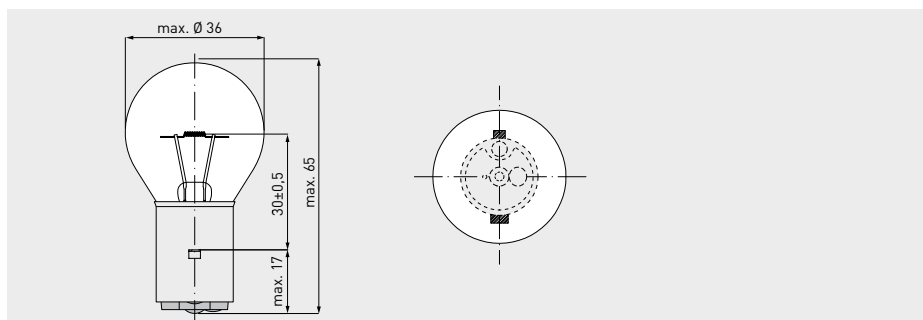
Domestic lamps

Other special lamps

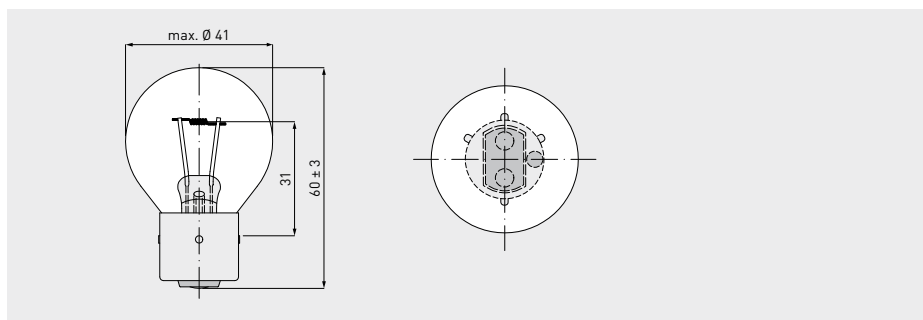
Vehicle lamps

For special vehicle lighting

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



Article no.	Description	V	W	Am- perage	Socket	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
00143500	24V 35W BA20s	24	35		BA20s	36	67	30	650	100			



Article no.	Description	V	W	Am- perage	Socket	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
00844073	24V 40W BA21d4	24	40	1.67	BA21d4	41	63	31	540	500			

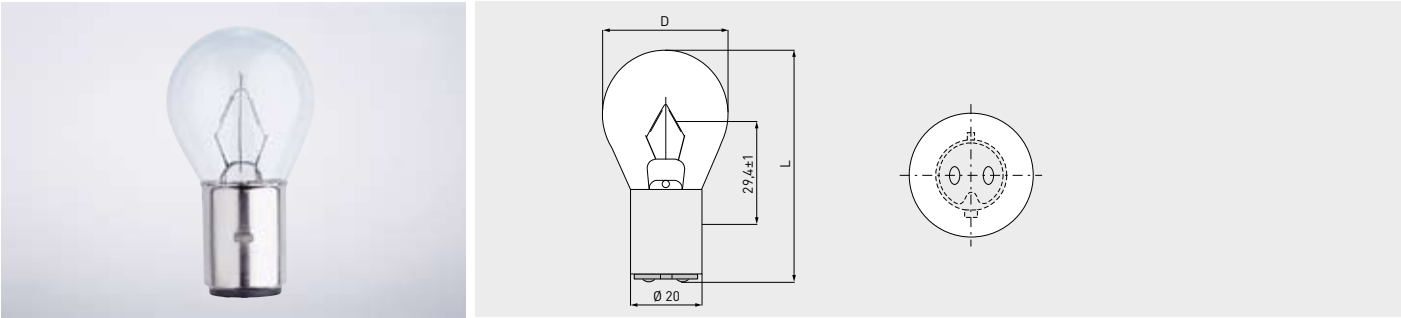


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00844082	28V 45W BA15s/19 35x59 clear	28	45		BA15s	36	58	31.8	750	600			

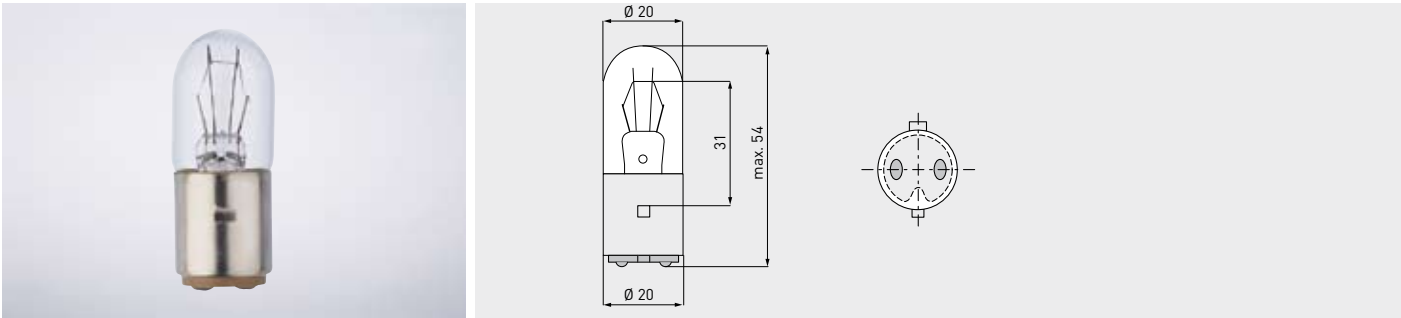
Vehicle lamps

For special vehicle lighting

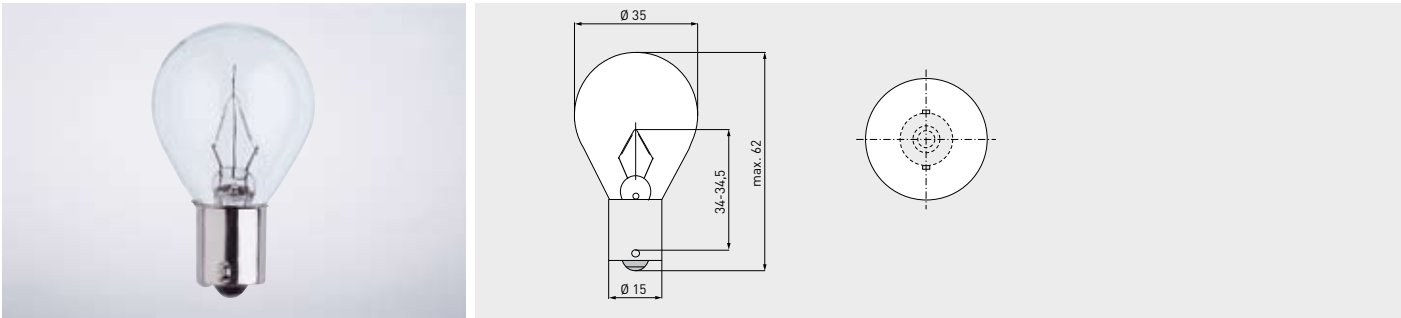
For special features, specific benefits and areas of use see page 33



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter D max. mm	Total length L max. mm	Light center length mm	Lumi- nous 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	Am- perage	Socket	Bulb diameter 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
00801000	80V 10W BA20d	80	10		BA20d	20	54	31	75	1,500			



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter 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
00945105	80V 25W BA15s	80	25		B15s	35	62	34.5	200	1,000			

Traffic signal lamps

Medical lamps

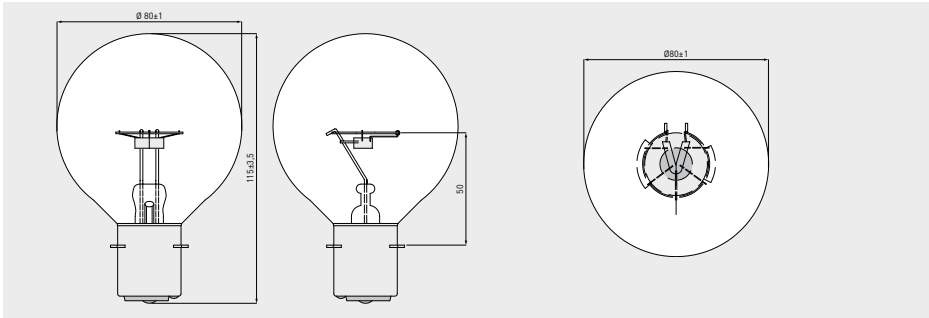
Photo, studio and stage lamps

Domestic lamps

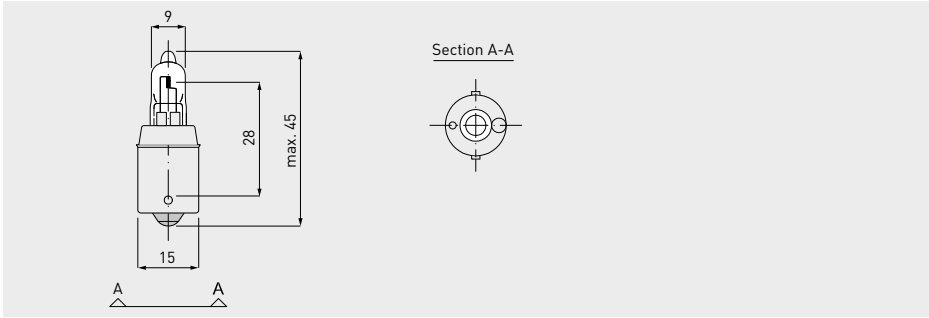
Other special lamps

Vehicle lamps
For special vehicle lighting

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



Article no.	Description	V	W	Am- perage	Socket	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
00844078	85V 250W P28s	85	250		P28s	81	118.5	50	4,120	500		S135	



Article no.	Description	V	W	Am- perage	Socket	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
8400242015	24V 20W BA 15s	24	20		BA15s	9	45	28	280	2,000			

Traffic signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps



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:

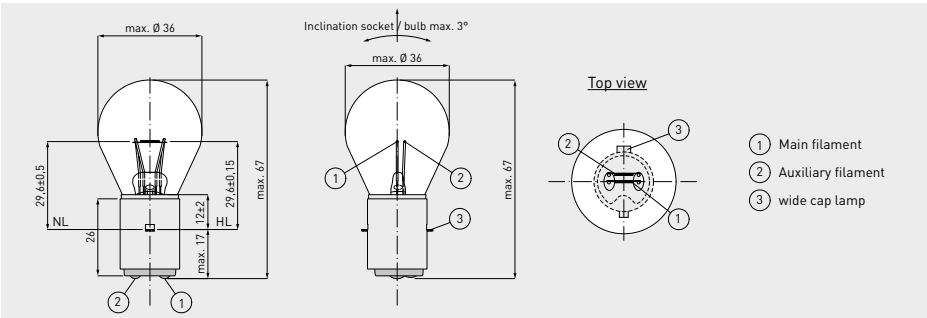
- fulfils the quality requirements of Deutsche Bahn AG
- dual-filament, excess-pressure technology lamps premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:

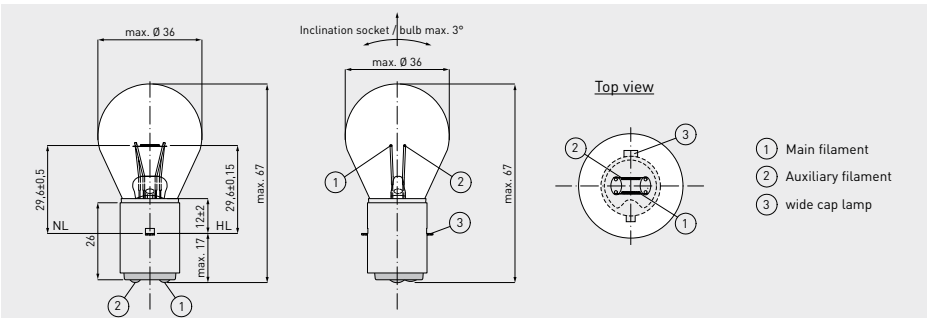
- switches to auxiliary filaments immediately if main filaments should malfunction
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to shock and vibration
- corrosion-proof, nickel-plated socket and nickel-plated base contacts to ensure safe electrical contact

Areas of use:

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



Article no.	Description	V	W	Am- perage	Socket	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
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

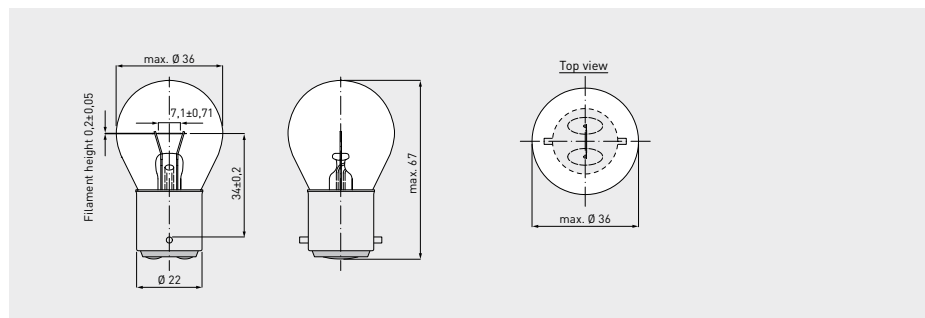


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Luminous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842087	12V 10/10W BA20d	12	10/10	0.85	BA20d	36	67	29.6	140	600	420	S135	200

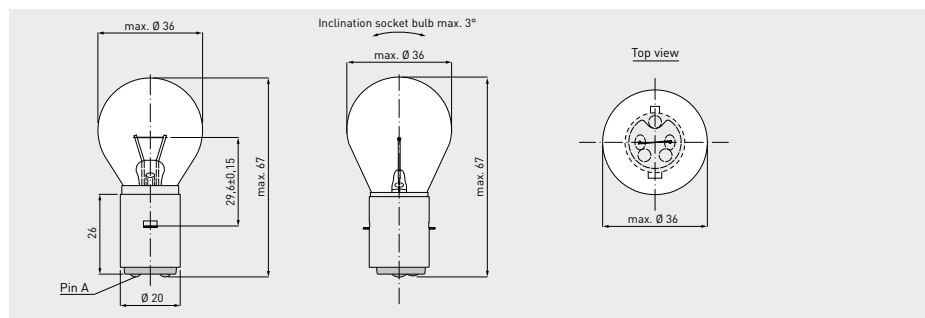
Signal lamps for the German railways (Deutsche Bahn)

For railway traffic signals

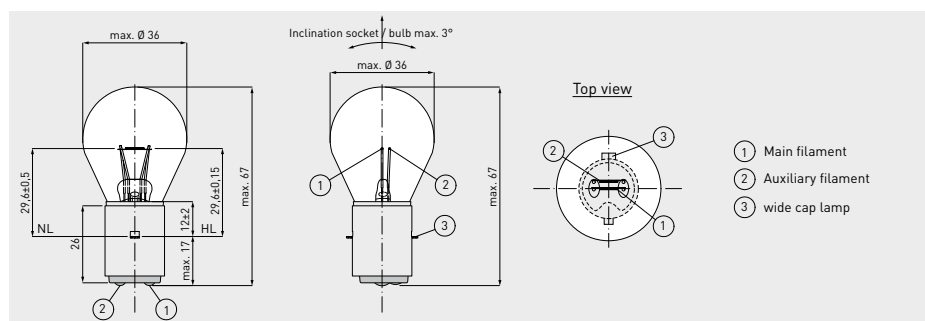
For special features, specific benefits and areas of use see page 42



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous flux 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	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous flux 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	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous flux 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:

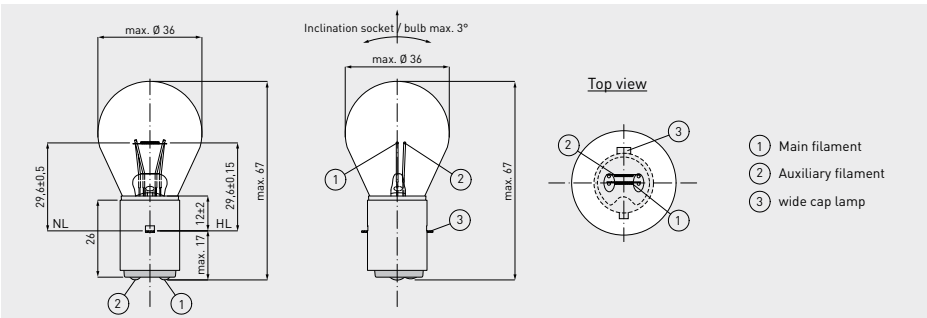
- excess-pressure technology lamps premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:

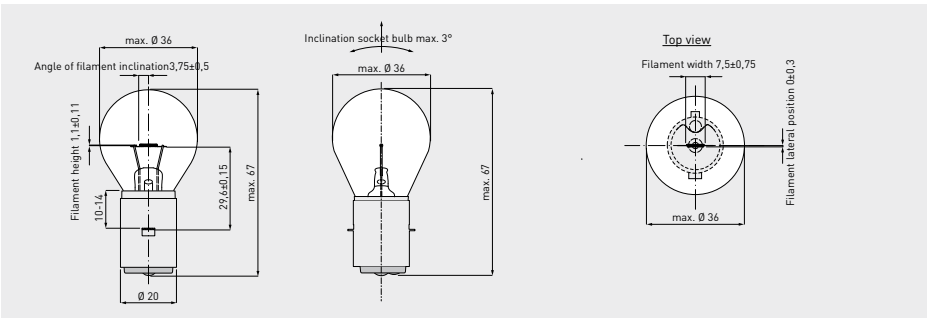
- switches to auxiliary filaments immediately if main filaments should malfunction
- must be replaced every von 12 months (1-year lamps), reducing maintenance costs
- high resistance to shock and vibration
- corrosion-proof, nickel-plated socket and nickel-plated base contacts to ensure safe electrical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

Areas of use:

- Railway traffic signals



Article no.	Description	V	W	Amperage	Socket	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
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	Socket	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
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:

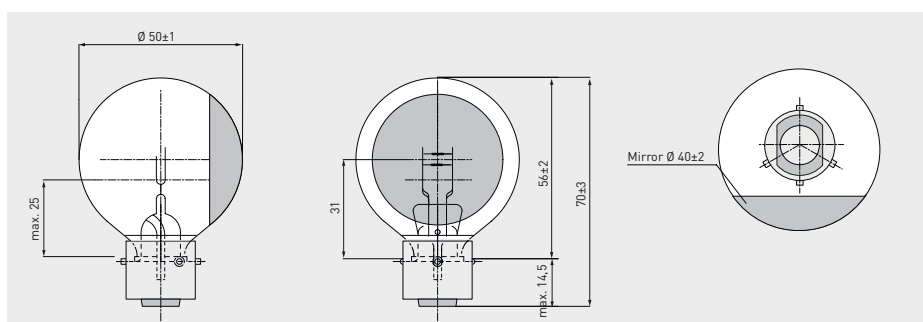
- fulfils the quality requirements of the French railway (SNCF)
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

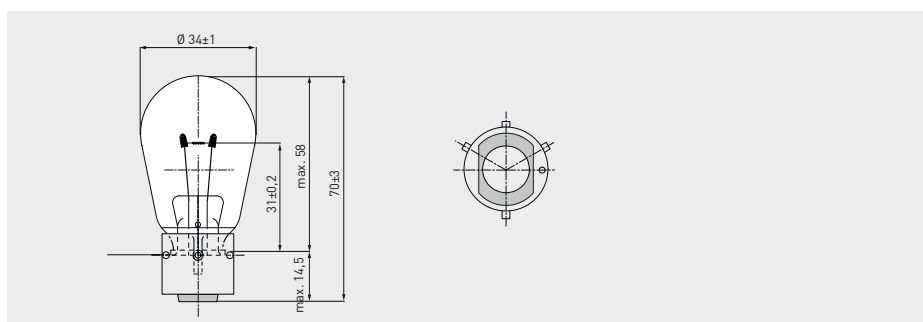
- long life
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated socket and nickel-plated base contacts to ensure safe electrical contact

Areas of use:

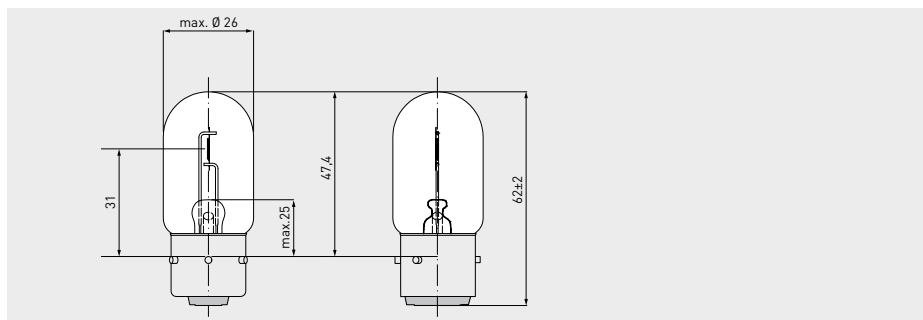
- railway traffic signals



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous 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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous 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

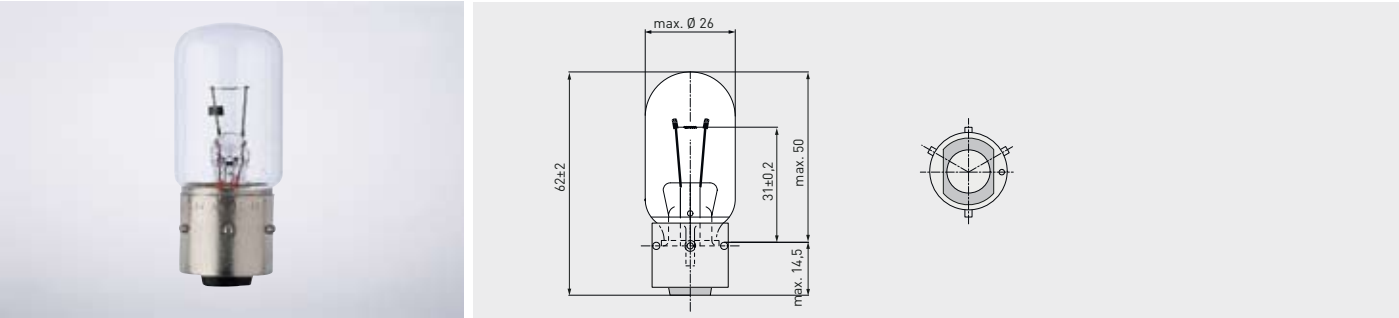


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light center length mm	Lumi- nous flux lm	Average life h	Individual life h ($<2\%$ malfunction)	Burning position	PU
9210 557 14122	7.7V 6W B21s-4 CL / T25	7.7	6		B21s-4	26	64	31	33	4,000			10

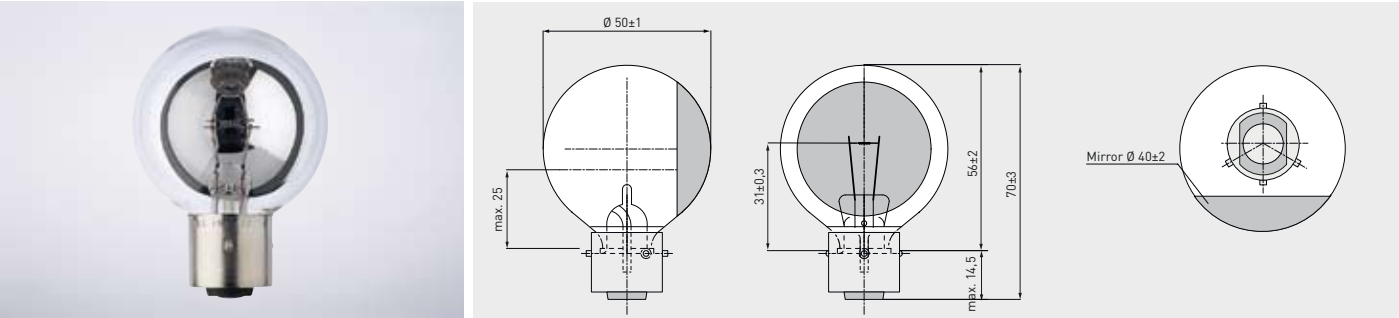
Signal lamps for the French railways

For railway traffic signals

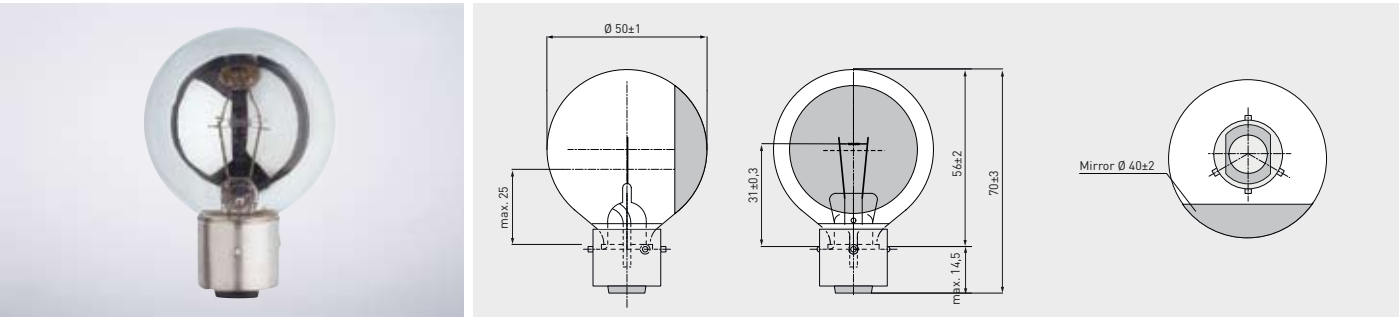
For special features, specific benefits and areas of use see page 45



Article no.	Description	V	W	Am- perage	Socket	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
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	Am- perage	Socket	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
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	Am- perage	Socket	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
9228 320 14422	19.4V 25W B21s-4 CL / SPH50	19.4	25		B21s-4	51	73	31	220	2,000			10

Railway signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Signal lamps for the French railways
For railway traffic signals

Special features:

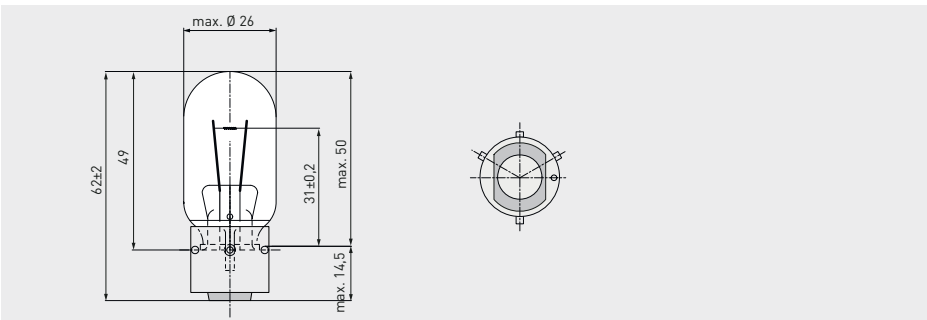
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

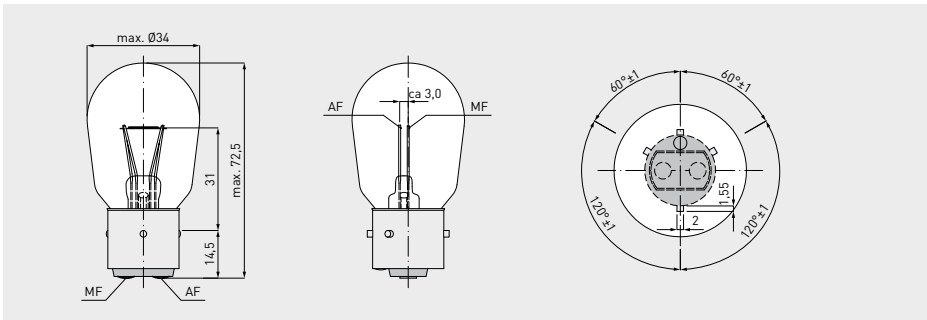
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated socket

Areas of use:

- railway traffic signals



Article no.	Description	V	W	Am- perage	Socket	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
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	Am- perage	Socket	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
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

Railway signal lamps

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

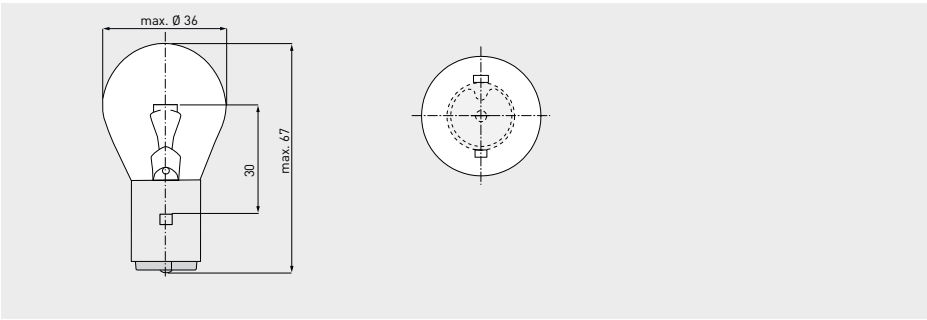
Specific benefits:

- long life
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to shock and vibration
- corrosion-proof, nickel-plated socket 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:

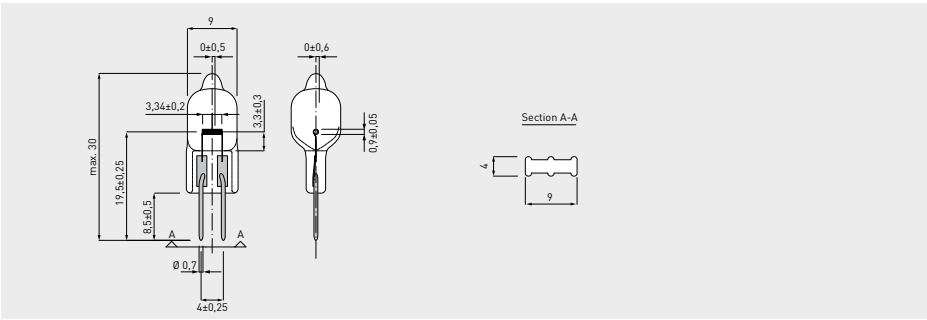
- Railway traffic signals (lamps with a transverse filament must be placed vertically to the luminary axis)

Medical lamps



Article no.	Description	V	W	Am- perage	Socket	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
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

Photo, studio and stage lamps



Article no.	Description	V	W	Am- perage	Socket	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
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

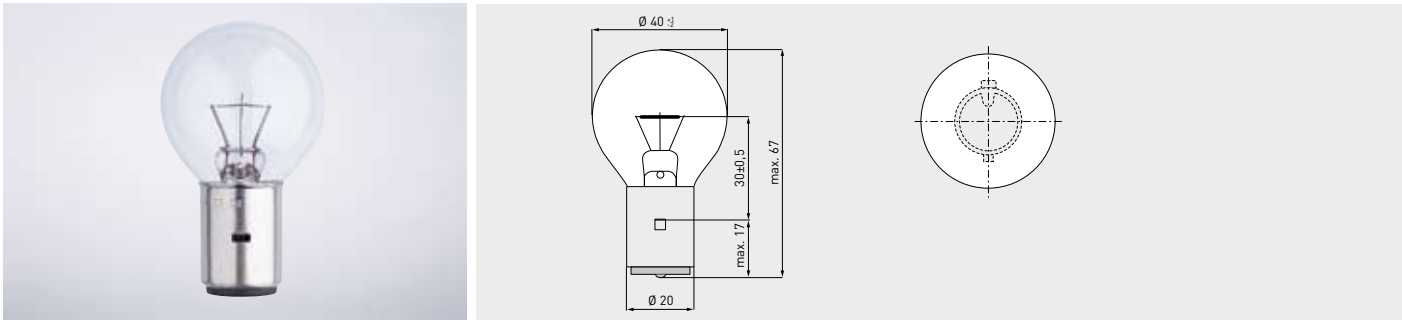
Domestic lamps

Other special lamps

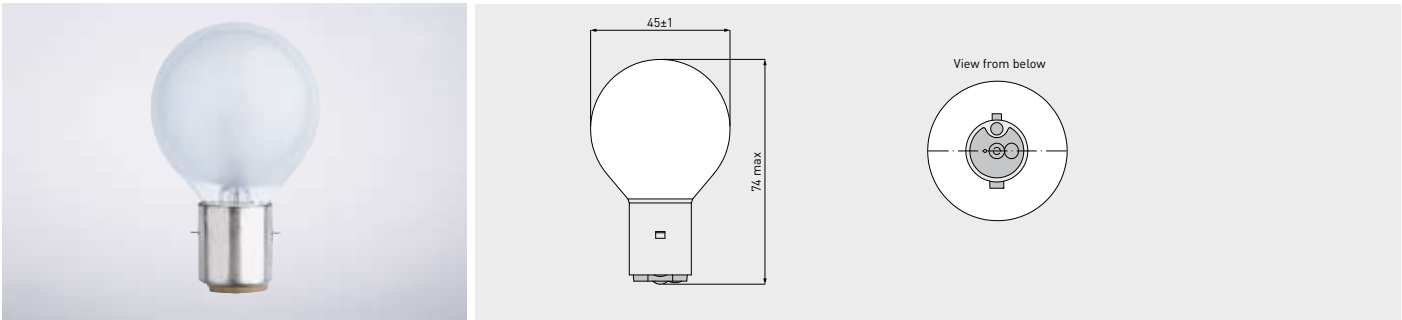
Signal lamps for the Italian railways

For railway traffic signals

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



Article no.	Description	V	W	Am- perage	Socket	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
00842434	95V 25W BA20s	95	25		BA20s	40	67	30	200	1,500			



Article no.	Description	V	W	Am- perage	Socket	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
00822435	125V 25W BA20s SATINIERT	125	25		BA20s	46	74	35	200	1,000			



Signal lamps for the British railways

For railway traffic signals

Railway signal lamps

Special features:

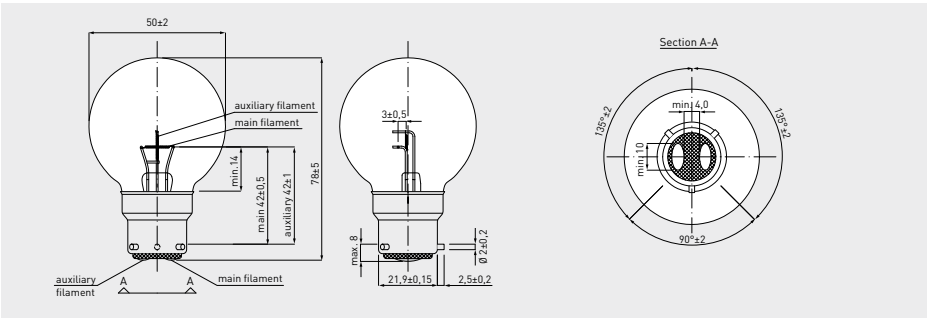
- dual-filament, excess-pressure technology lamps premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

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 socket

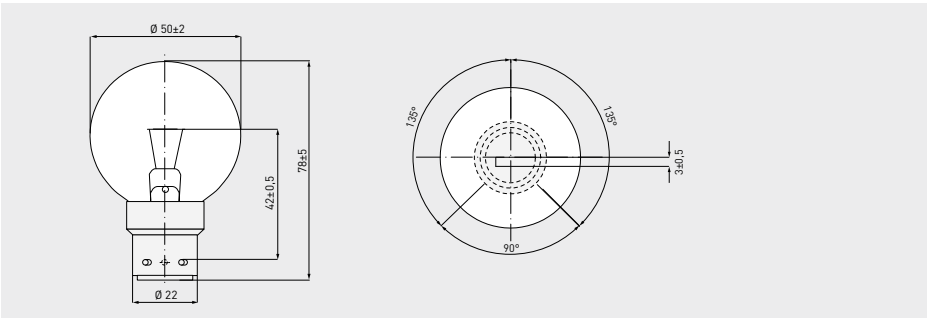
Areas of use:

- railway traffic signals



Article no.	Description	V	W	Am- perage	Socket	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
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			

Photo, studio and stage lamps



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- ous 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			

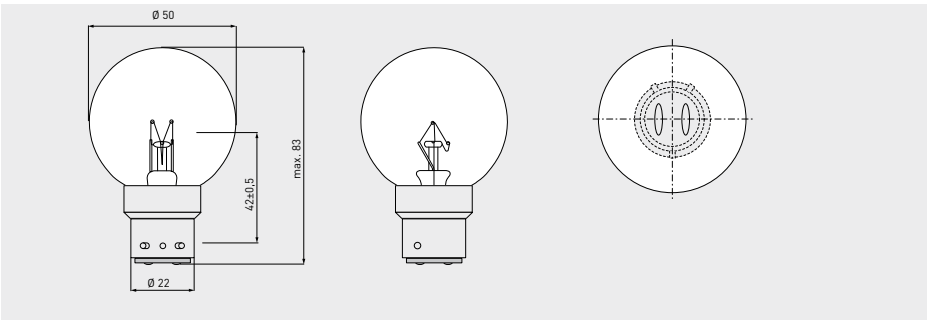
Domestic lamps

Other special lamps

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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous 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			



Railway signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Signal lamps for the Belgian railways

For railway traffic signals

Railway signal lamps

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

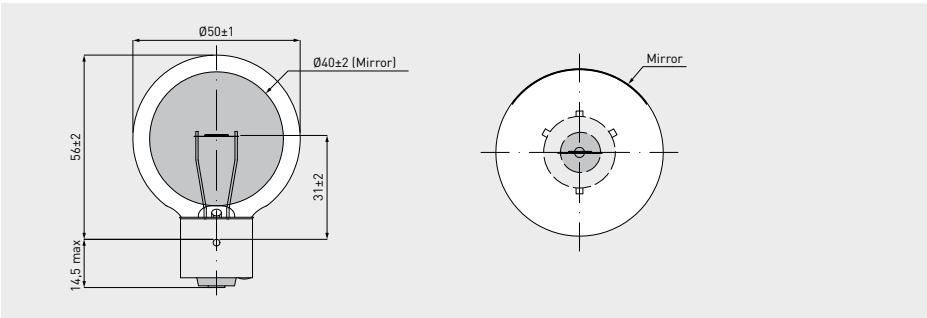
Specific benefits:

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

Areas of use:

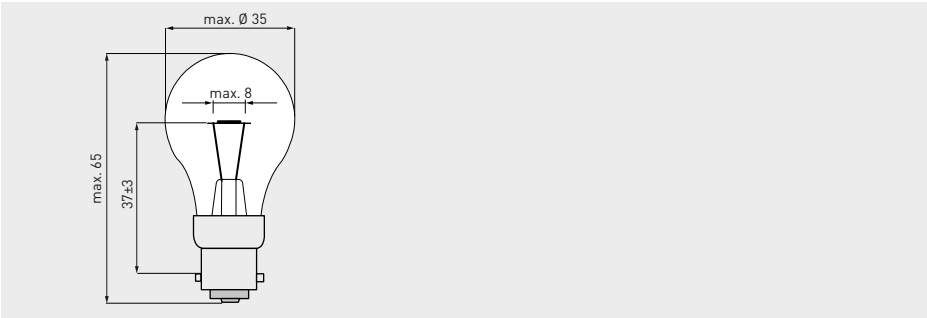
- Railway traffic signals

Medical lamps



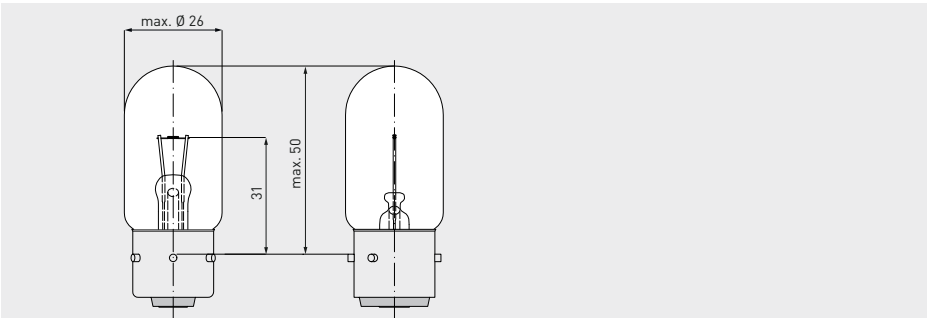
Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842499	10V 20W BA21s4	10	20		BA21s-4	51	70	31	min. 200	1,000			

Photo, studio and stage lamps



Article no.	Description	V	W	Am- perage	Socket	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
00842498	24V 5W BA15d/24x17	24	5		BA15d	35	65	37	min. 25	4,000			

Domestic lamps



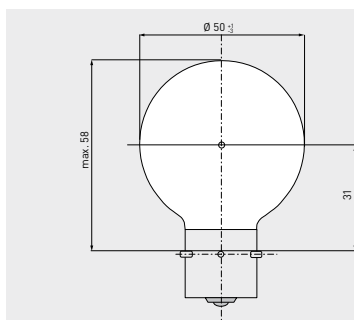
Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842496	24V 5W BA21s4	24	5		BA21s-4	26	64	31	min. 27	4,000			

Other special lamps

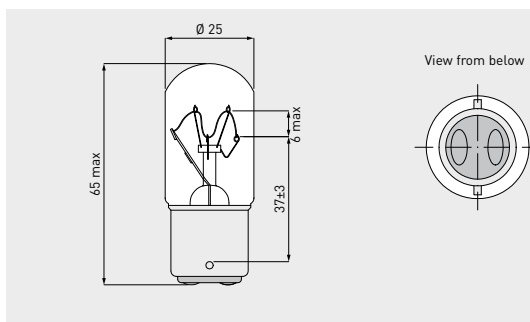
Signal lamps for the Belgian railways

For railway traffic signals

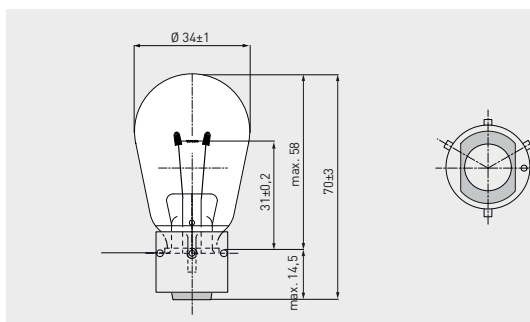
For special features, specific benefits and areas of use see page 52



Article no.	Description	V	W	Am- perage	Socket	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 BA21s-4	40	20		BA21s-4	51	73	31	min. 140	4,000			



Article no.	Description	V	W	Am- perage	Socket	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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous 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

Railway signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Special features:

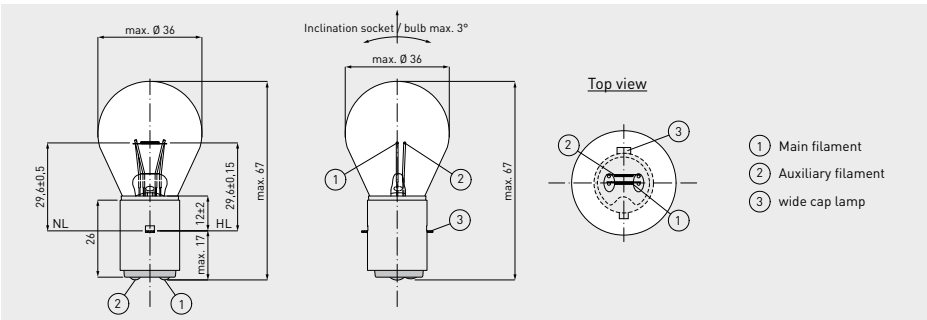
- excess pressure lamps with dual-filament technology
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary

Specific benefits:

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

Areas of use:

- Railway traffic signals



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



Further railway lamps
For railway traffic signals

Special features:

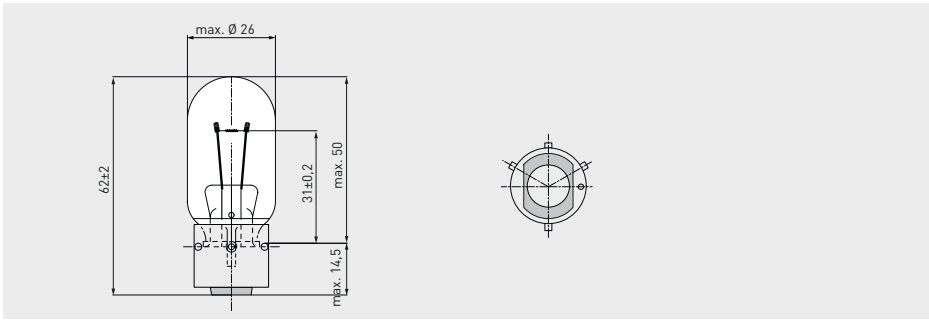
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

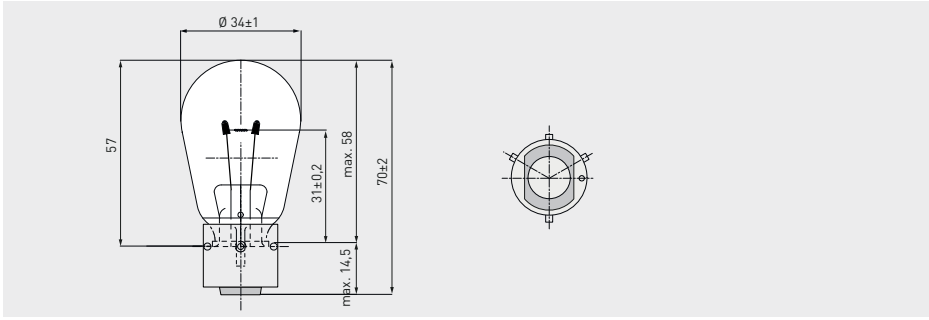
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated socket

Areas of use:

- Railway traffic signals



Article no.	Description	V	W	Am- perage	Socket	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
9245 223 14522	8V 2W Ba21s-4 CL / T25	8	2	0.25	B21s	26	64	31	9.3	4,000			10

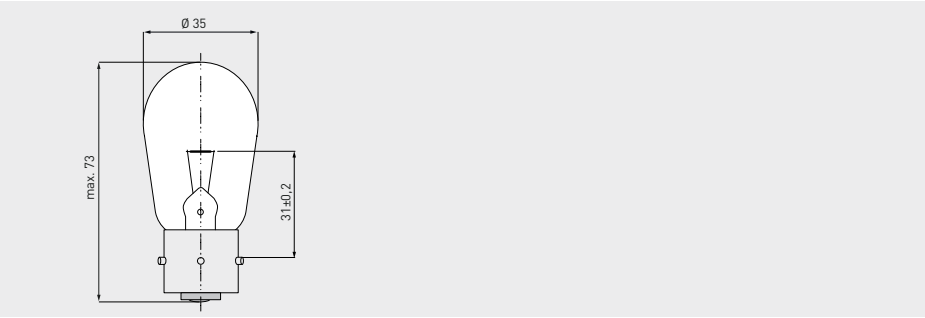


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
9228 313 14122	7.7V 6W Ba21s-4 CL / P34	7.7	6	0.78	B21s	35	72	31	33	4,000			10

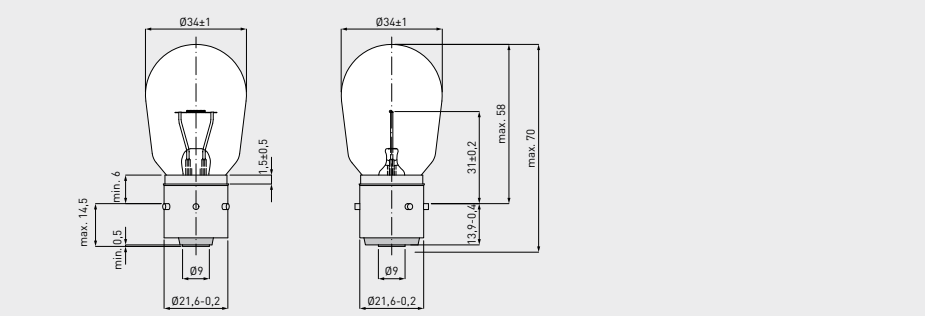
Further railway lamps

For railway traffic signals

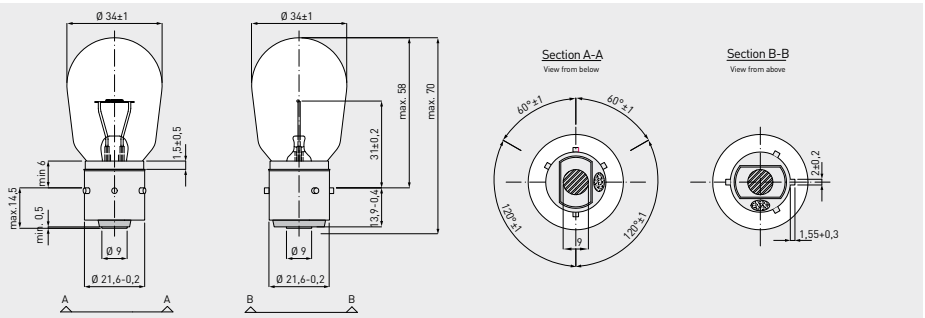
For special features, specific benefits and areas of use see page 55



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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			

Railway signal lamps

Medical lamps

Photo, studio and stage lamps

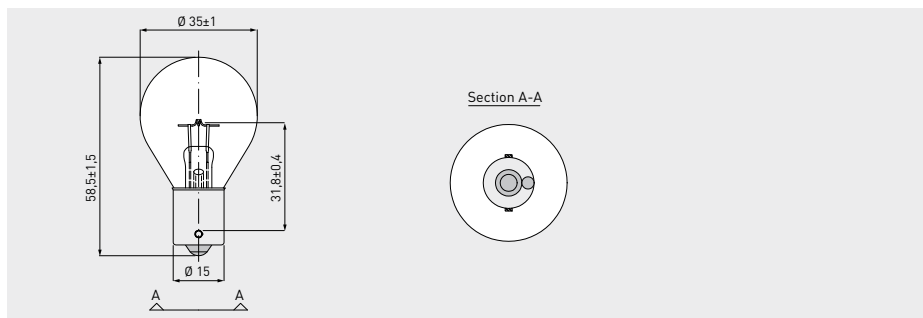
Domestic lamps

Other special lamps

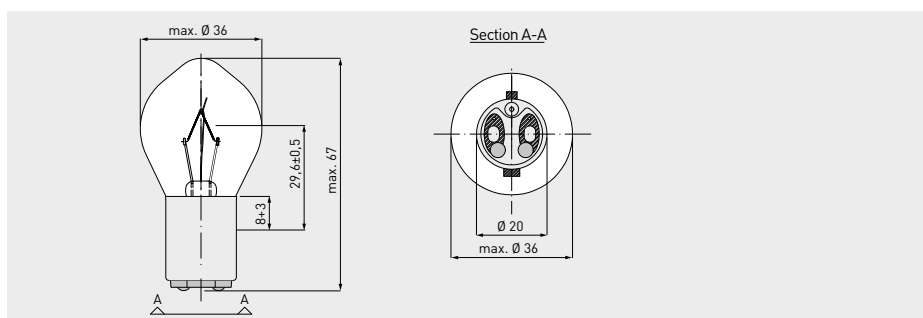
Further railway lamps

For railway traffic signals

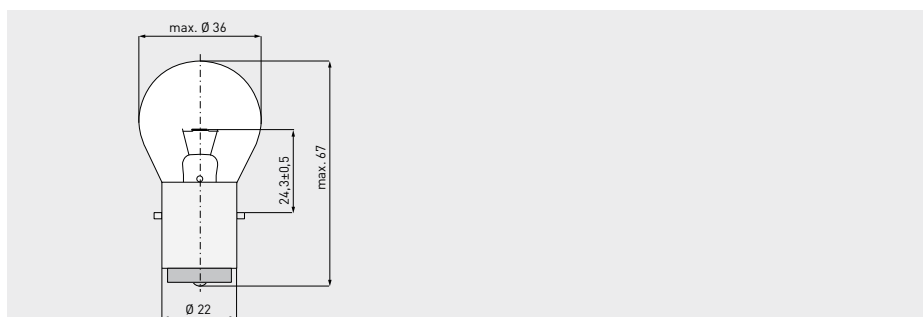
For special features, specific benefits and areas of use see page 55



Article no.	Description	V	W	Am- perage	Socket	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
00842495	10V 25W BA15s/19 CC6 S11	10	25		BA15s	36	60	31.8	380	1,000			



Article no.	Description	V	W	Am- perage	Socket	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
00842553	32V 25W BA20d/26 35x67 clear	32	25		BA20d	36	67	29.6	350	600			

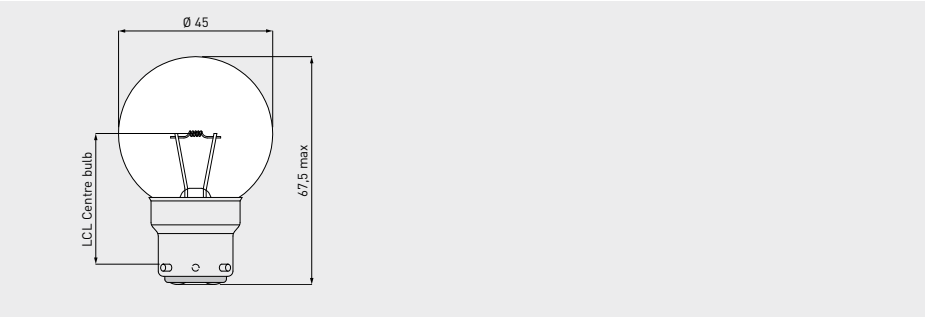


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842012	24V 35W BX22d/32	24	35		BX22d	36	67	24.3	540	500			

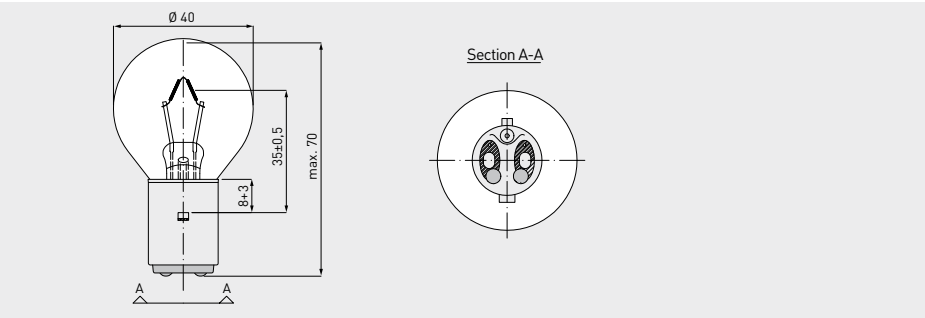
Further railway lamps

For railway traffic signals

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



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



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



Railway signal lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps

Further dual-filament technology railway lamps

For railway traffic signals

Special features:

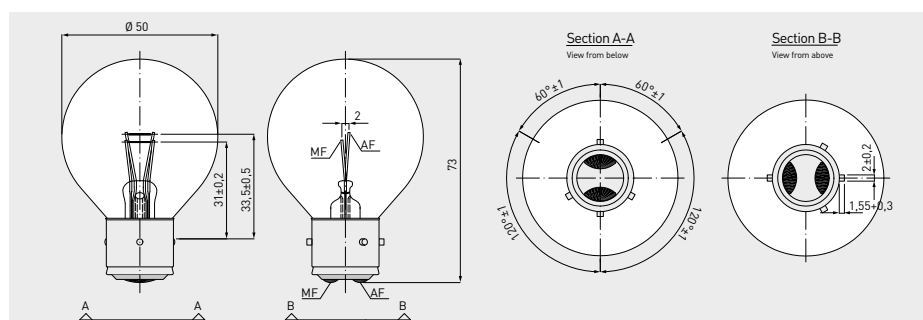
- Excess pressure lamps with dual-filament technology
- premium-quality inert gas filling
- precision of manufacture, minimum tolerances in the positioning of the filaments

Specific benefits:

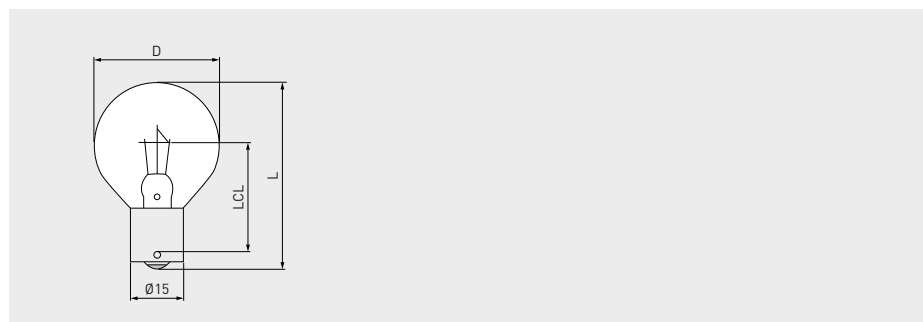
- must be replaced every 12 months (1-year lamps), reducing maintenance costs
- high resistance to outside influences, shock and vibration
- corrosion-proof, nickel-plated socket

Areas of use:

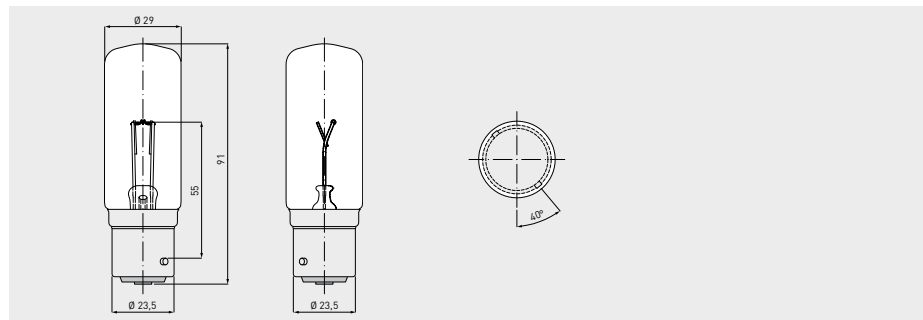
- Railway traffic signals



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light centre length	Lumi- nous f ux lm	Average life	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	Am- perage	Socket	Bulb diameter	Total length	Light centre length	Lumi- nous f ux lm	Average life	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			

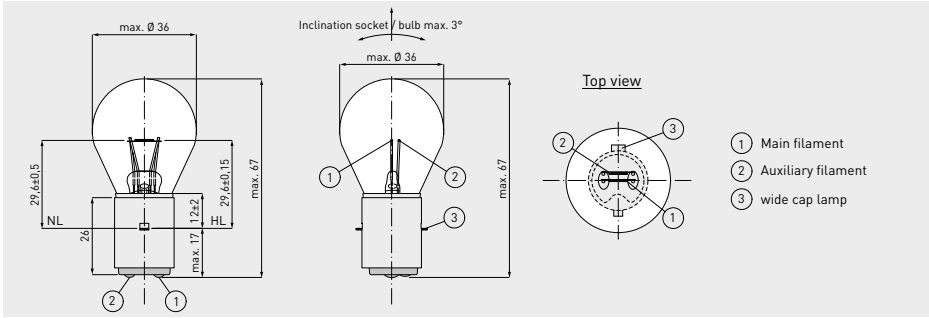


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light centre length	Lumi- nous f ux lm	Average life	Individual life h (<2% malfunction)	Burning position	PU
00842403	10V 18/3.5W P24s	10	18/3.5		P24s	29	91	55	230	500			

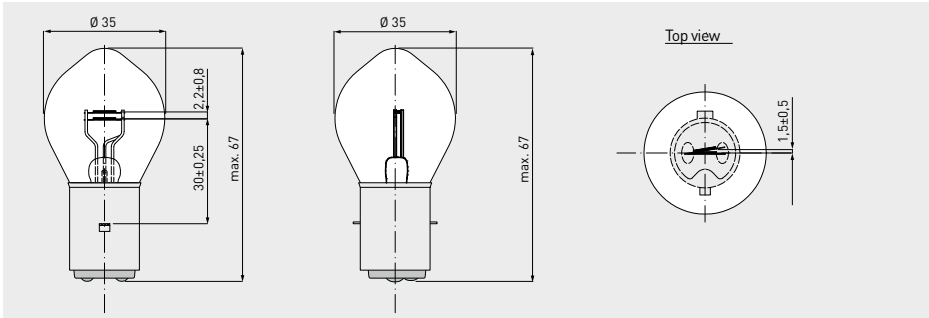
Further dual-filament technology railway lamps

For railway traffic signals

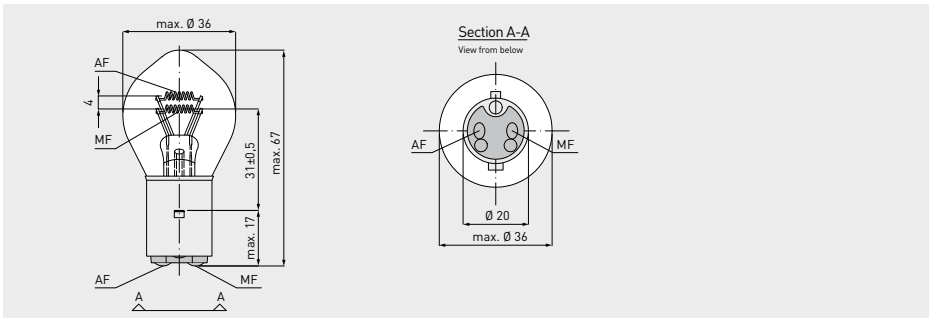
For special features, specific benefits and areas of use see page 59



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light centre length	Lumi- nous f ux lm	Average life	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	Socket	Bulb diameter	Total length	Light centre length	Lumi- nous f ux lm	Average life	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		

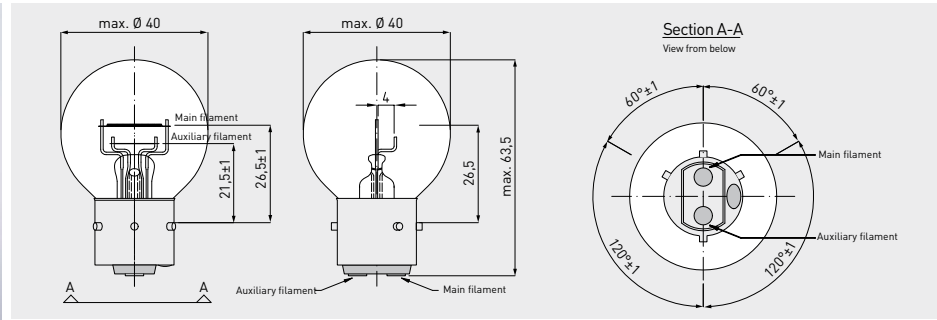


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light centre length	Lumi- nous f ux lm	Average life	Individual life h (<2% malfunction)	Burning position	PU
00842337	30V 35/35W BA20d	30	35/35		BA20d	36	67	31	480	200			
00842147	24V 60/60W BA20d (35mm- bulb)	24	60/60		BA20d	36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

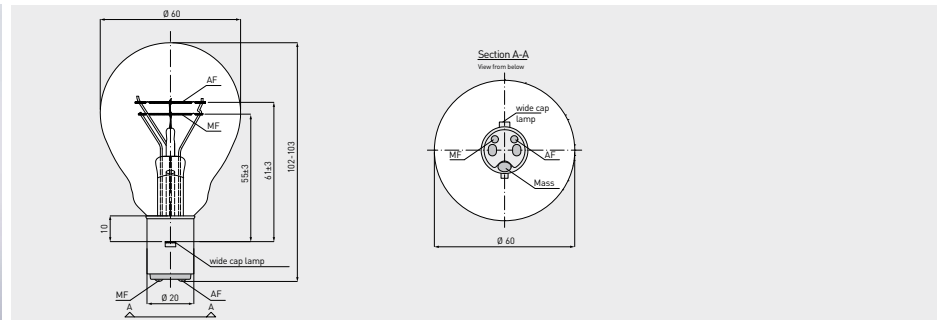
For special features, specific benefits and areas of use see page 59





Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light cent- re length	Lumi- nous f ux	Average life	Individual life	Burning position	PU
00844074	30V 50/18W BA21d4	30	50/18		BA21d-4	40	63.5	26.5/21.5	600/120		h [<2% malfunction]		





Article no.	Description	V	W	Am- perage	Socket	Bulb diameter	Total length	Light cent- re length	Lumi- nous f ux	Average life	Individual life	Burning position	PU
00842093	24V 60/60W BA20d (60mm- bulb)	24	60/60		BA20d	60	102-103	55/61	880	2,000	h [<2% malfunction]		48

Standard wagon lamps

For railway vehicles



Standard wagon lamps

For railway vehicles

Special features:

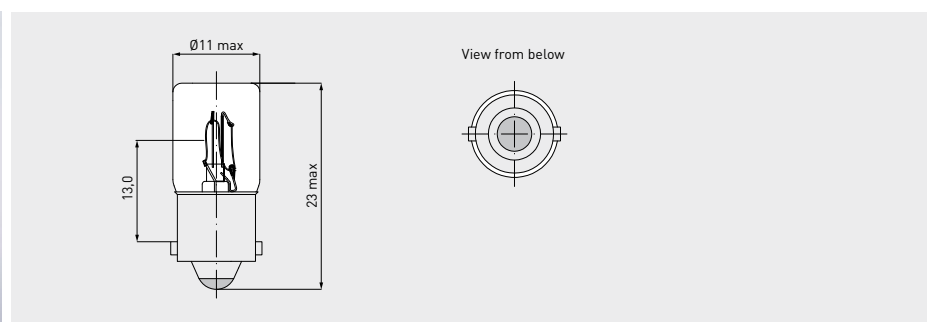
- precision of manufacture, minimum tolerances in the positioning of the filaments
- compact luminary
- premium-quality inert gas filling
- available in transparent and matt versions

Specific benefits:

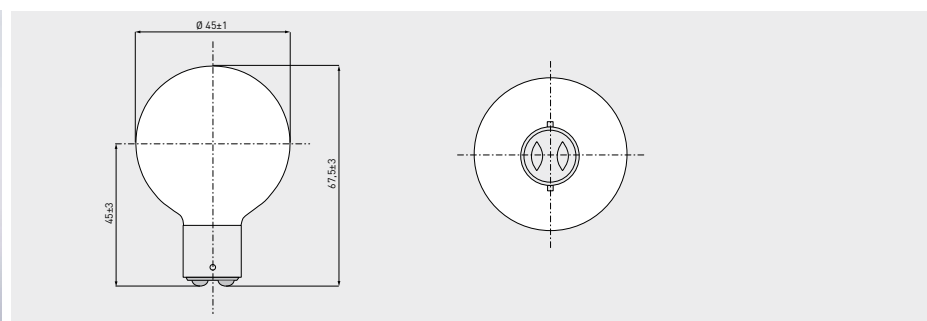
- very robust, high resistance to shock and vibration
- no flickering
- corrosion-proof, nickel-plated socket

Areas of use:

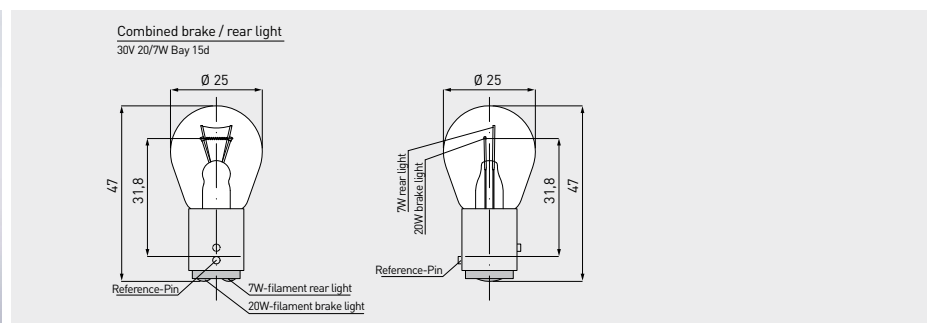
- light signals in cabins and wagons
- reading lamps
- internal wagon lighting



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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			

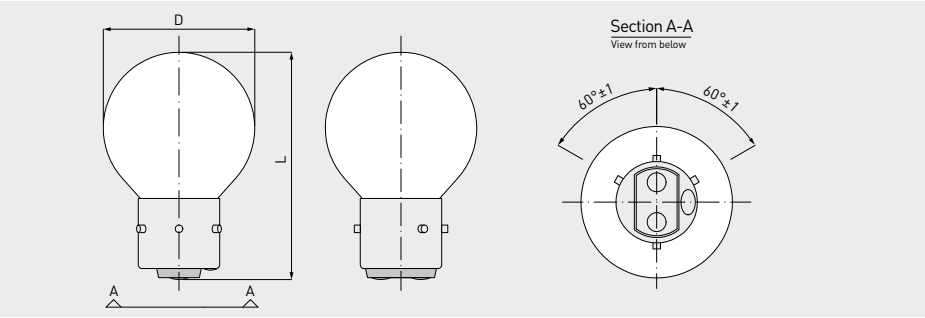


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter mm	Total length mm	Light centre length mm	Lumi- nous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842313	30V 20/7W BAY15d	30	20/7		BAY15d	25	47	31.8	320/40				

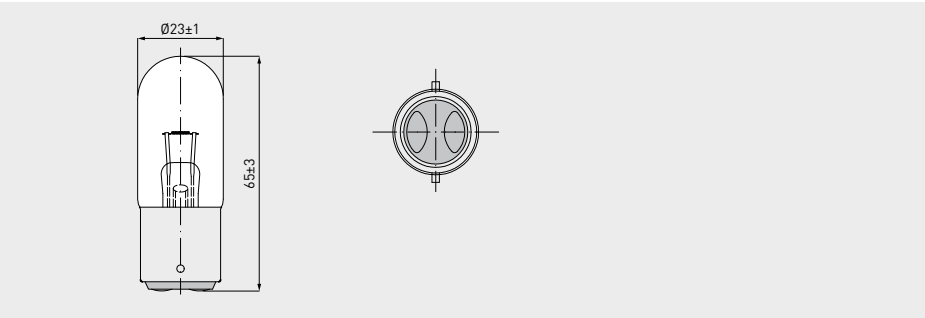
Standard wagon lamps

For railway vehicles

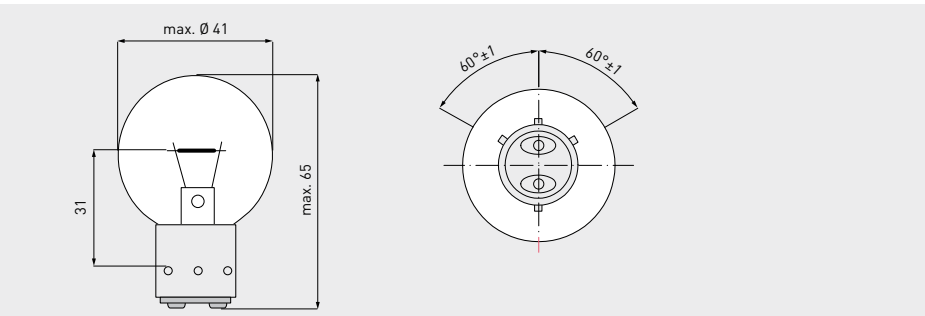
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Am- perage	Socket	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
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	Am- perage	Socket	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
00845300	24V 25W B22d/22 T.23x65 clear	24	25		B22d/22	24	68		243	800			

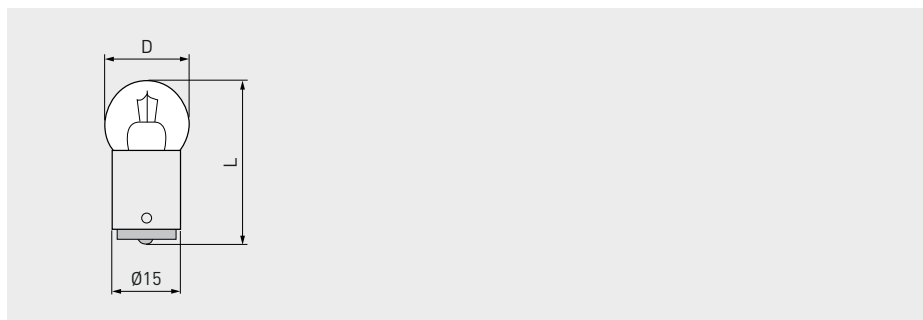


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous f ux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842514	24V 36/36W BA21d4 S40x65 clear	24	36/36		BA21d-4	41	65	31	430	1,000			

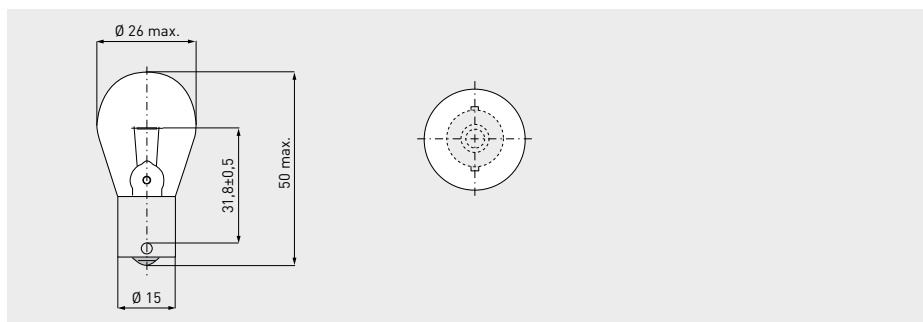
Standard wagon lamps

For railway vehicles

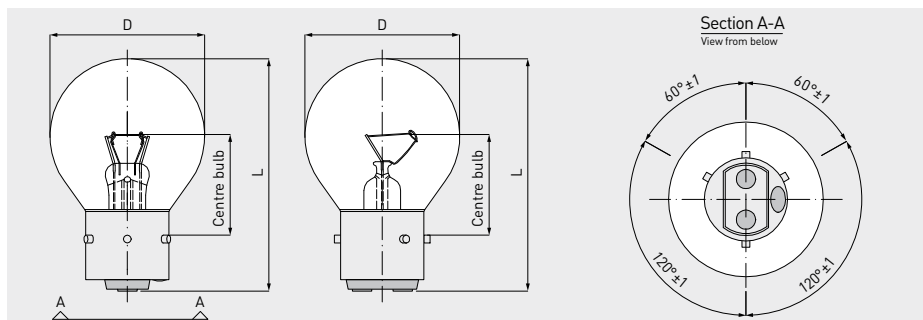
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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	Am- perage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Lumi- nous flux 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			

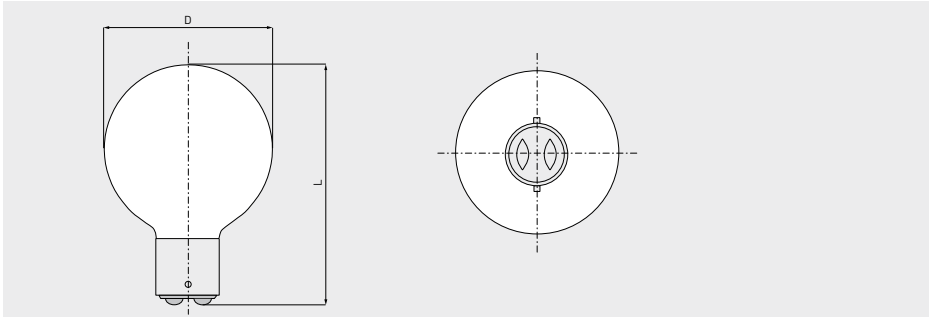


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi- nous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00845288	28V 45W BA21d-4 S40x63.5 clear	28	45		BA21d-4	41	63.5		550	2,000			
00842534	85V 40W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

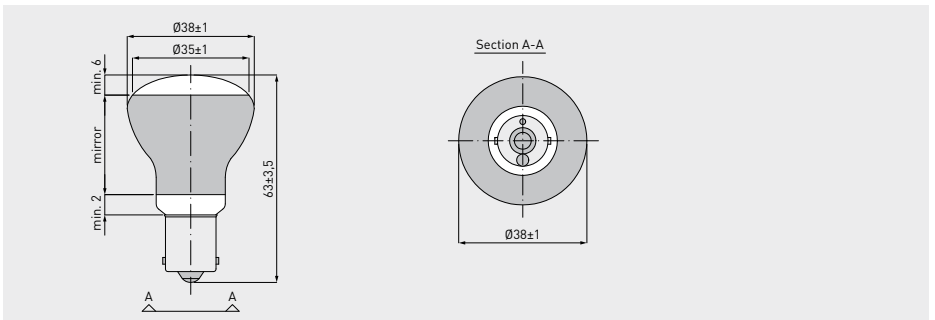
Standard wagon lamps

For railway vehicles

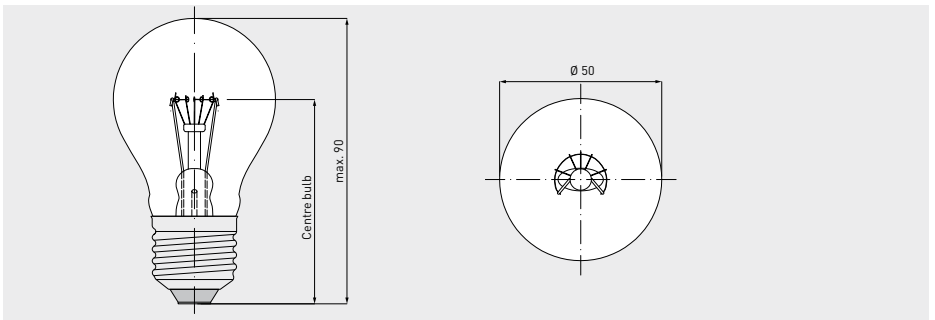
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Socket	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
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	Socket	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 646 22422	32V 20W BA15s/19 R12	32	20		BA15s	39	66.5	NA	NA	300			10

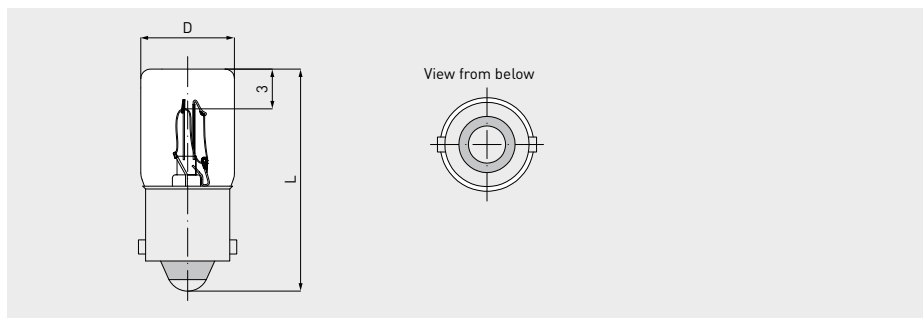


Article no.	Description	V	W	Amperage	Socket	Bulb diameter mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00825299	75V 40W E27 50x90 matt	75	40		E27	50	90		480	2,000			

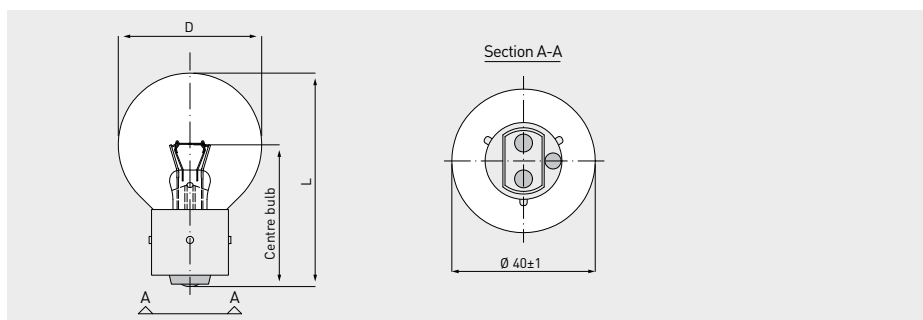
Standard wagon lamps

For railway vehicles

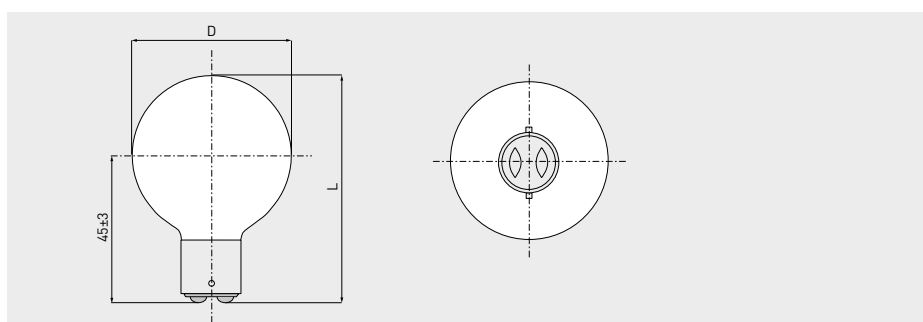
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Am- perage	Socket	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi- nous flux 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	Am- perage	Socket	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi- nous flux 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			

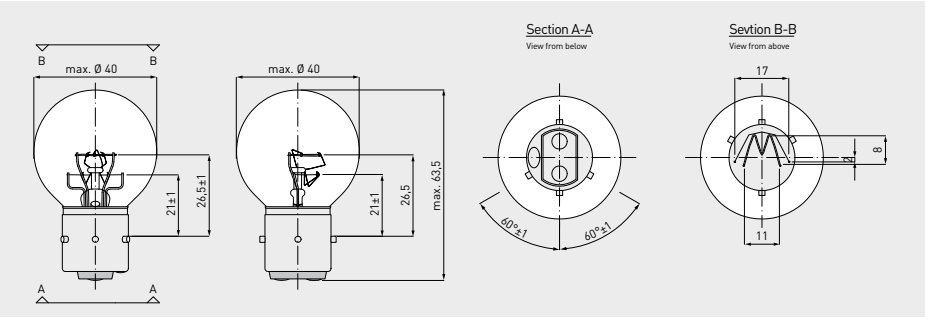


Article no.	Description	V	W	Am- perage	Socket	Bulb diameter D max. mm	Total length L max. mm	Light centre length LCL mm	Lumi- nous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00842501	85V 25W B22d 45x67.5 clear	85	25		B22d	46	72	45	195	500			
00842536	85V 40W B22d/25x26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

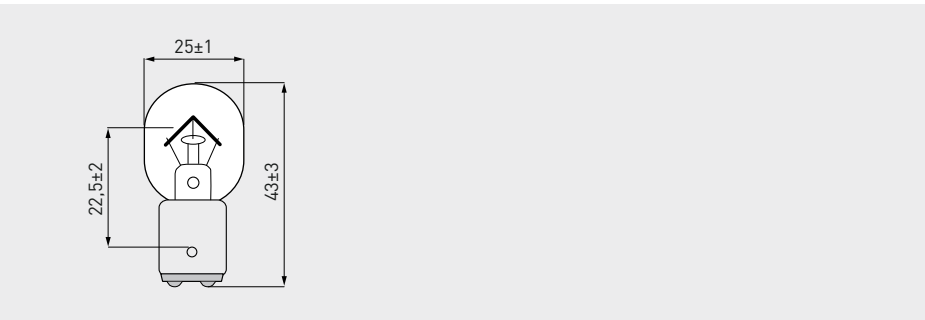
Halogen wagon lamps

For railway vehicles

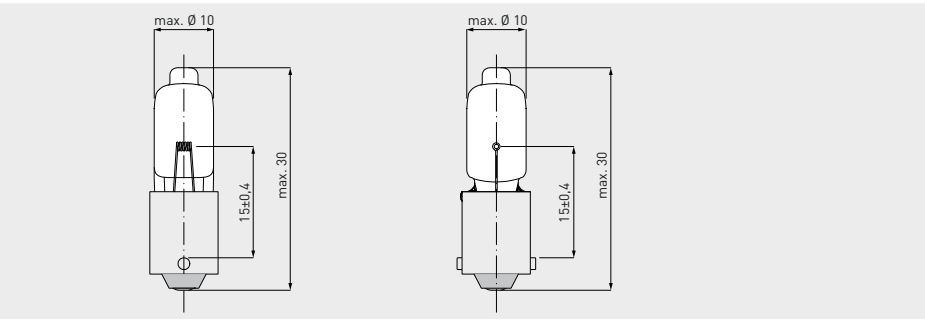
For special features, specific benefits and areas of use see page 63



Article no.	Description	V	W	Amperage	Socket	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
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	Socket	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
00842505	95V 10W BA15d	95	10	0.11	BA15d	26	46	22.5	77	500			

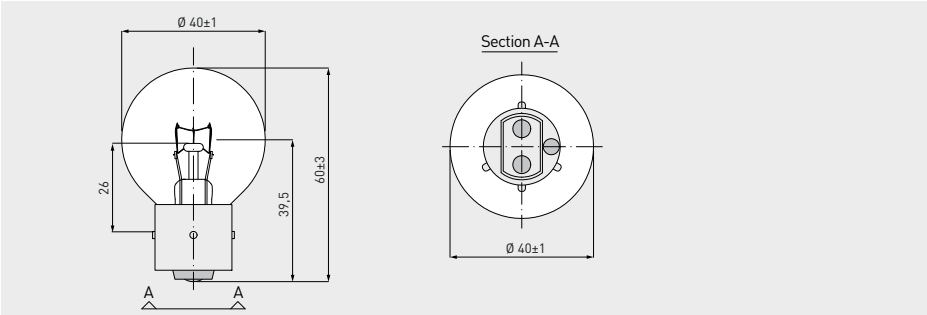


Article no.	Description	V	W	Amperage	Socket	Bulb diameter max. mm	Total length max. mm	Light centre length mm	Luminous flux lm	Average life h	Individual life h (<2% malfunction)	Burning position	PU
00847124	28V 11.5W BA9s/13 Halogen	28	11.5	0.41	BA9s	10	30	15	160	2,000			

Standard wagon lamps

For railway vehicles

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



Article no.	Description	V	W	Am- perage	Socket	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
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			



Railway vehicle lamps

Medical lamps

Photo, studio and stage lamps

Domestic lamps

Other special lamps