



# Lighting Program 2003/2004 Automotive Lamps

SEE THE WORLD IN A NEW LIGHT

**OSRAM**



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Certified to DIN EN ISO 9001



**The base stamp**  
**The base stamp (this is the base of an OSRAM H8 lamp) contains the most important lamp data.**



# See the world in a new light

For almost 100 years the name of OSRAM has stood for excellence in light throughout the world. The name was registered way back in 1906. In 1919 Siemens & Halske AG, Deutsche Gasglühlicht AG and AEG merged their light bulb production activities to form OSRAM GmbH. Today we are one of the three largest lamp manufacturers in the world.

## Light is life

With its innovative technologies and solutions, OSRAM has continually opened up new horizons in artificial lighting – in offices, factories and homes, and on the roads. Light is an essential part of our everyday lives. Thanks to a wide range of lamps and lighting systems from OSRAM we can live our lives independently of natural daylight. Artificial light gives us greater safety and comfort, is important for

advances in science and technology and helps us conserve our valuable natural resources.

## OSRAM is your partner.

We supply customers in more than 140 countries. Our sales logistics and highly developed order processing system ensure that OSRAM products are delivered at the right time to the right place throughout the world.

Because of rapid advances in lighting technology, it is essential to keep knowledge up to date and to keep expanding product ranges. We can help you here with new lamp systems, information on the latest developments and events in which we can expand your expertise as a lighting consultant.



*OSRAM Classic*



*OSRAM HALOLUX® BT*



*OSRAM DULUX® EL  
Longlife E14*



*OSRAM LUMILUX®*



*OSRAM POWERSTAR®  
HCI®-T*



*OSRAM ULTRA-  
VITALUX®*



-  **54 factories in 18 countries**
-  **59 companies and sales support centres for 92 countries**
-  **53 countries served by local offices or by OSRAM GmbH, Munich**

**The quickest route to innovative automotive lighting from OSRAM is via our internet and online service – so quick and easy.**

**Are you a car driver?**

At [www.osram.com](http://www.osram.com) you'll find all the information you need about light in general and about our products. The Automotive Lighting Products section offers specific information about our range of light sources and systems for automobiles; the Automotive Lighting Application Guide will help you find the products for replacing or upgrading the lighting equipment of your own vehicle.

**Are you a car accessory dealer or mechanic?**

Our comprehensive Product Catalog at [www.osram.com](http://www.osram.com) provides you with all the information needed to identify OSRAM Automotive Lighting innovations and high-value products for your customers. If you have any questions for which you can't find the answers here, you will find email addresses under "Contact" at [www.osram.com](http://www.osram.com) where you can send your queries.

**... and OSRAM is a TECDOC partner**



**OSRAM MINIWATT®**  
T5 lamp



**OSRAM BACKlight**



**OSRAM Halogen**  
BILUX® H4



**OSRAM HMI®**  
metal halide lamp



**QUICKTRONIC®**  
MULTIWATT



**OSRAM MINISPOT**



# Automotive lamps

**OSRAM, the world's number one in modern automotive lighting**

OSRAM automotive lamps have been showing the way forward since 1925 when OSRAM launched the first two-filament headlight lamp for high and low beam. It made night-time driving much safer and won world-wide renown under the name of BILUX®.

Today, the OSRAM Automotive Lighting division is number one in the world in automotive lamps. Thanks to our innovative technology and total commitment to quality, we are now an original equipment supplier to almost every car manufacturer.

There is great demand throughout the world particularly for our light sources that offer greater drivers safety and comfort, such as the electronically controlled XENARC® discharge lamps or halogen headlight lamps.

**Quality, the no. 1 safety factor**

Automotive lamps from OSRAM are durable and safer than prescribed by international standards.



We have designed and constructed all our high-precision production facilities ourselves, complete with computer-controlled camera systems, to ensure the highest standards of quality are met. Each BILUX® H4 lamp, for example, has to go through 22 different checks and inspections before it is released.



## OSRAM innovations: shining examples

Vehicle lighting is vital to road safety. Seeing and being seen helps avoid accidents. Light is also gaining in importance as a design element that manufacturers are using to make their cars look different.

### The lighting revolution on the roads: XENARC® gas discharge lamps

The advantages of gas discharge technology are well-known – higher luminous flux, higher luminous efficacy, reduced heat output and much longer lamp life. Light is generated by an arc in an extremely small quartz bulb. With XENARC® gas discharge lamps, these benefits have been brought to vehicle lighting.

XENARC® D2S has been designed specifically for projection headlights. As more and more headlights are being constructed from plastic materials an outer bulb made from UV-absorbent quartz has been added to suppress the UV components in the light that can swiftly degrade these plastics. XENARC® D2R is used in reflector headlights. A new type of anti-dazzle strip on the outer bulb helps create a sharp boundary between light and dark.

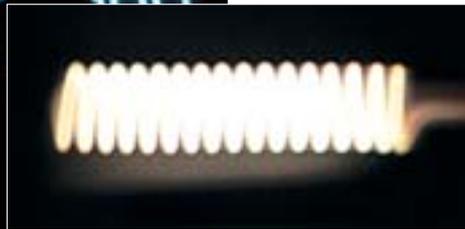
Because the starter is integrated in the lamp base, XENARC® electronic D1S and D1R are more compact. The interplay between the lamp and the electronic system is optimised. Additional shielding offers a high level of electromagnetic compatibility.



Halogen headlights



XENARC® system



*The short compact filament of the H9 lamp has the highest luminance of any ECE approved halogen lamp for headlights.*

**Now you see it, now you don't: DIADEM® indicator lamp**

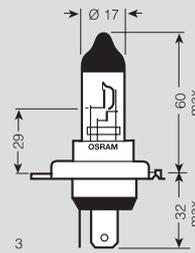
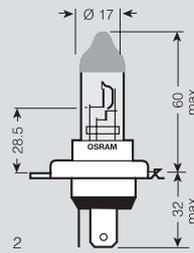
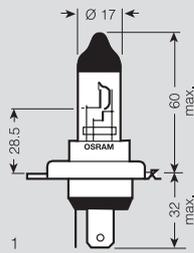
Clear headlights are all the rage. Our new DIADEM® indicator lights emit an amber light only when they are actually on. Otherwise they appear opal white without the strange "fried egg" effect associated with standard amber-coated lamps. These innovative lamps make it easier for manufacturers to produce new headlight cluster designs. DIADEM® can be used as direct replacements for conventional amber lamps so drivers of older models can easily improve the looks of their cars.

The DIADEM® signal lamp is interference-coated, scratchproof and cadmium-free. It is ideal for all indicators, both front and rear and are approved for use throughout Europe. Another important advantage is

that it lasts twice as long as conventional yellow coated indicator lamps.



# Headlight lamps



**BILUX® H4 OSRAM SILVERSTAR®.** The SVS shines up to 50% more light on the road ahead. Equipped with a silver cap for stylish looks in complex-shape headlights. It is ECE approved for use in any country.

**BILUX® H4 ALLSEASON SUPER lamps** have an interference coating to produce yellowish light. This reduces the risk of glare in rain, fog and snow. The COOL BLUE® version appeals to all drivers who prefer individual headlight design. It is ECE approved for use in any country.

Product reference

Product number



## HALOGEN BILUX® H4 hard-glass lamps, reduced UV emission

64193	4050300001470	●	H4	12	60/55	P43t	1	100
64193SUP <sup>3)</sup>	4050300467245	●	H4	12	60/55	P43t	1	100
64193SVS <sup>6)7)</sup>	4050300629711	●	H4	12	60/55	P43t	6	100
64196	4050300016542	●	H4	24	75/70	P43t	3	100
9003L <sup>1)</sup>	4050300308975	●	HB2 <sup>2)</sup> /H4	12	60/55	P43t	1	100
9003XV <sup>1)3)</sup>	4050300601366	●	HB2 <sup>2)</sup> /H4	12	60/55	P43t	1	100

## BILUX® H4 as COOL BLUE® (CB) and ALLSEASON SUPER (ALS) with colour coating and reduced UV emission

64193ALS <sup>3)</sup>	8)	●	H4	12	60/55	P43t	without fig. 100	
64193CB <sup>7)</sup>	4050300552255	●	H4	12	60/55	P43t	2	100
9003CB <sup>1)7)</sup>	4050300575179	●	HB2 <sup>2)</sup> /H4	12	60/55	P43t	2	100

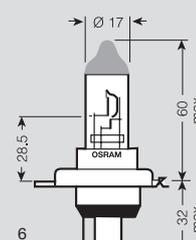
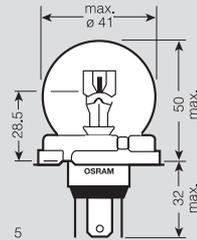
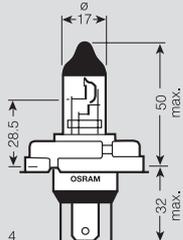
## BILUX® AS® HALOROAD® R2 halogen headlight lamp

64183 <sup>4)5)</sup>	4050300350554	●	R2	12	45/40	P45t	4	100
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## BILUX® AS® conventional headlight lamp (discontinued)

7951	4050300001500	●	R2	12	45/40	P45t	5	100
7952	4050300016405	●	R2	24	55/50	P45t	5	100

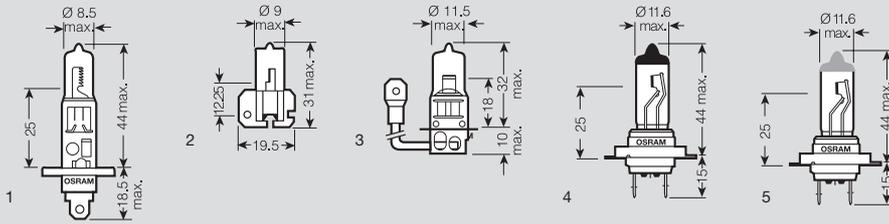
Up to 50% more light on the road. H1, H7 and H4 lamps: the OSRAM SILVERSTAR® series. First-class visibility and perfect optics.



1) Lamps comply with ECE R 37 and SAE (DOT) regulations  
2) SAE category reference, H4 with strict geometrical tolerances  
3) SUPER version for more light on the road (up to 30%)  
4) Successor to BILUX® AS® lamp. Product reference 7951

5) Reduced UV radiation  
6) SILVERSTAR® version for more light on the road (up to 50%)  
7) With silver cap  
8) On request  
See also self-service range

# Headlight lamps



Product reference	Product number	E	K	ECE	V	W		No.	
<b>Halogen single-filament headlight lamps, reduced UV emission</b>									
64150 <sup>1)</sup>	4050300001487	•		H1	12	55	P14.5s	1	100
64150S <sup>1)2)</sup>	4050300410180	•		H1	12	55	P14.5s	1	100
64151 <sup>1)</sup>	4050300001494	•		H3	12	55	PK22s	3	100
64151S <sup>1)</sup>	4050300410810	•		H3	12	55	PK22s	3	100
64155	4050300016498	•		H1	24	70	P14.5s	1	100
64156	4050300016535	•		H3	24	70	PK22s	3	100
64173	4050300016559	•		H2	12	55	X511	2	100
64175	4050300218960	•		H2	24	70	X511	2	100
64210 <sup>1)</sup>	4050300332185	•		H7	12	55	PX26d	4	100
64215	4050300386522	•		H7	24	70	PX26d	4	100
<b>SILVERSTAR® H1 and H7 lamps, up to 50% more light, reduced UV emission (H7 with silver cap)</b>									
64150SVS <sup>1)4)</sup>	4050300647852	•		H1	12	55	P14.5s	1	100
64210SVS <sup>1)4)5)</sup>	4050300629643	•		H7	12	55	PX26d	5	100
<b>SUPER H1- and H3 lamps, 30% more light, reduced UV emission</b>									
64150SUP <sup>1)3)</sup>	4050300479408	•		H1	12	55	P14.5s	1	100
64151SUP <sup>1)3)</sup>	4050300504445	•		H3	12	55	PK22s	3	100
<b>COOL BLUE®, ALLSEASON and ALLSEASON SUPER with colour coating, reduced UV emission</b>									
64150ALS <sup>1)3)</sup>	<sup>6)</sup>	•		H1	12	55	P14.5s	without fig. 100	
64150CB <sup>1)</sup>	4050300575209	•		H1	12	55	P14.5s	without fig. 100	
64151ALS <sup>1)3)</sup>	<sup>6)</sup>	•		H3	12	55	PK22s	without fig. 100	
64151CB <sup>1)</sup>	4050300647920	•		H3	12	55	PK22s	without fig. 100	
64210ALL <sup>1)</sup>	<sup>6)</sup>	•		H7	12	55	PX26d	without fig. 100	
64210CB <sup>1)5)</sup>	4050300580197	•		H7	12	55	PX26d	without fig. 100	

## ALLSEASON SUPER

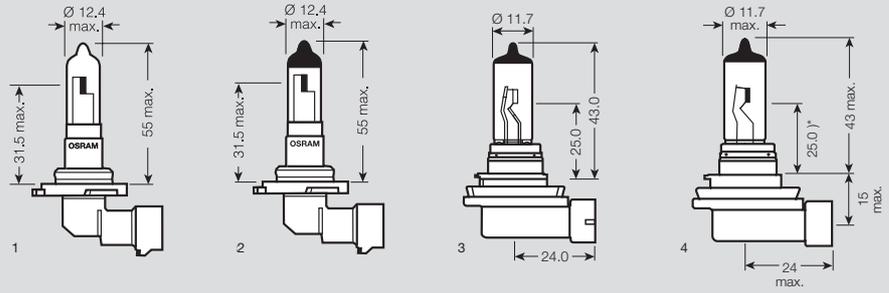
The headlight lamps with yellowish light. Interference coating to reduce glare in rain, fog and snow. ECE-approved in the H1, H3, H4 and H7 versions.



1) Lamps comply with ECE R 37 and SAE (DOT) regulations  
 2) Strict geometrical tolerances  
 3) SUPER version for more light on the road (up to 30%)

4) SILVERSTAR® version for more light on the road (up to 50%)  
 5) With silver cap  
 6) On request  
 See also self-service range

# Headlight lamps



Product reference

Product number



## Halogen single-filament headlight lamps with plastic bases, reduced UV emission

64211 <sup>1)</sup>	4050300524313	•	H11	12	55	PGJ19-2	3	100
64211SUP <sup>1)2)</sup>	4050300530727	•	H11	12	55	PGJ19-2	3	100
<b>New</b> 64216	3)	•	H11	24	70	PGJ19-2	3	100
64212 <sup>1)</sup>	4050300498751	•	H8	12	35	PGJ19-1	4	100
64213 <sup>1)</sup>	4050300524368	•	H9	12	65	PGJ19-5	5	100
9005 <sup>1)</sup>	4050300012643	•	HB3	12	60	P20d	1	100
9005CB <sup>1)</sup>	4050300189673	•	HB3	12	60	P20d	without fig.	100
9005XS <sup>1)</sup>	3)	•	HB3A	12	60	P20d	6	100
9006 <sup>1)</sup>	4050300012650	•	HB4	12	51	P22d	2	100
9006CB <sup>1)4)</sup>	4050300189697	•	HB4	12	51	P22d	without fig.	100
9006XS <sup>1)</sup>	4050300532400	•	HB4A	12	51	P22d	7	100
9055	4050300193991	•	H12	12	53	PZ20d	8	100
9145	4050300186320	•	H10	12	42	PY20d	9	100

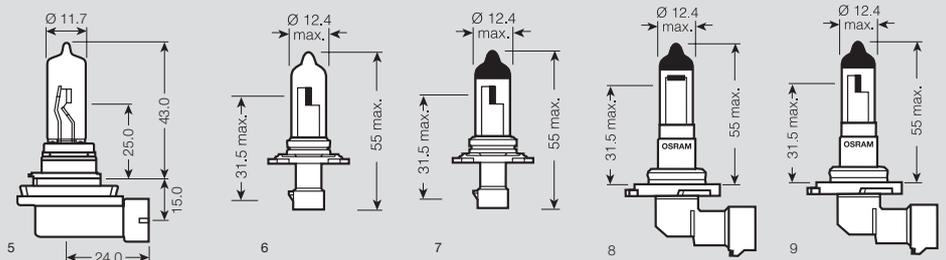
**New 4000 K**

**New 4000 K**

*Innovative technology and total commitment to quality have made OSRAM a prime supplier to almost every major car manufacturer in the world.*



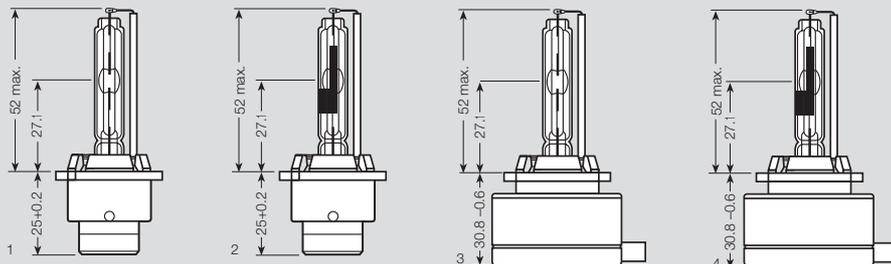
*H8 lamp for use in the latest complex-shape reflectors. An innovative sealed base design and the precise filament alignment of the H7 lamp were the basis for the development of the energy-saving H8 model. A must for thermally critical headlights.*



1) Lamps comply with ECE R 37 and SAE (DOT) regulations  
2) H11 with increased luminance and reduced power consumption

3) On request  
4) With silver cap  
See also self-service range

# Headlight lamps



Product reference

Product number



## XENARC® and XENARC® electronic gas discharge headlight lamps – revolutionary technology

66040 <sup>1)2)</sup>	4050300357393	•	D2S	*)	35	P32d-2	1	10
66042 <sup>1)2)</sup>	4050300604657	•	D1S	*)	35	PK32d-2	3	10
66050 <sup>1)3)</sup>	4050300433486	•	D2R	*)	35	P32d-3	2	10
66052 <sup>1)3)</sup>	4050300604732	•	D1R	*)	35	PK32d-3	4	10

\*) For use only with appropriate electronic control gear; available on request

OSRAM XENARC® and XENARC® electronic lamps have up to three times the luminous efficacy of tungsten-halogen lamps.



Comparison		D2S	D2R	D1S	D1R
Rated wattage	W	35	35	35	35
Luminous flux	lm	3200	2800	3200	2800
Luminous efficacy	lm/W	91	80	91	80
Colour temperature	K	4250	4150	4250	4150
Average luminance	cd/cm <sup>2</sup>	6500*	6500*	6500*	6500*
Lamp life	h B3	1500	1500	1500	1500
	Tc	3000	3000	3000	3000
Filament/arc length	mm	4.2	4.2	4.2	4.2

\* Minimum value

The values for D1S and D1R are identical to those of D2S and D2R.

With the development of the XENARC® electronic D1S and D1R, OSRAM is helping to improve and simplify gas discharge headlight systems. By integrating the starter in the lamp base the lamps can be made more compact and the interplay between the lamp and the electronic system can be optimised.

XENARC® electronic D1S/R (page 13), XENAELECTRON® the control gear (page 14) and the relevant connecting cable (page 15) together are the perfectly matched system solution from OSRAM.

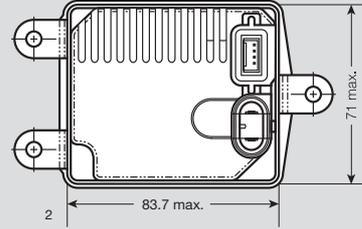
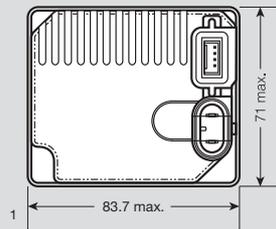
1) Reduced UV emission

2) For projection headlights

3) With anti-dazzle strips for reflector headlights

See also self-service range

# Control gear for XENARC® headlight lamps



**OSRAM XENAELECTRON®**  
is the perfectly matched  
control gear for the  
XENARC® electronic  
lamp in automotive  
applications.

Product reference	Product number		V	Hz	A	W
<b>XENAELECTRON® for XENARC® electronic gas discharge headlight lamps</b>						
XENAELECTRON® 35W XT-D1/12V	4050300650012	D1S & D1R	12	400	15	42 <sup>1)</sup>
XENAELECTRON® 35W XT-D1/12V TAB	4050300657318	D1S & D1R	12	400	15	42 <sup>1)</sup>

Product reference	°C min.-max.	l [mm]	b [mm]	h [mm]		No.	
XENAELECTRON® 35W XT-D1/12V	-40 ... 105	84	70	30	280	1	40
XENAELECTRON® 35W XT-D1/12V TAB	-40 ... 105	124	74	32	320	2	40

The control gear complies with type of protection IP X7.

A D1 system consists of the OSRAM D1 XENAELECTRON® 35W XT-D1/12V control gear, a power supply cable between the control gear and the lamp and the OSRAM D1 XENARC® electronic lamp.

## D1-HID system properties

- Perfectly matched to OEM automotive requirements
- Compact design of the XENAELECTRON® control gear, only 143 ml in volume

- Reduction in high voltage on the connecting cable by a factor of more than 20
- Highly flexible connecting cable between the control gear and the lamp
- Elimination of the costly and critical high-voltage plug connections on the lamp
- Optimised and integrated high-voltage igniter in the protected lamp base
- Tried and tested lamp technology based on D2 lamp applications

XENARC® electronic D1S/R (page 13), XENAELECTRON® the control gear (page 14) and the relevant connecting cable (page 15) together are the perfectly matched system solution from OSRAM.

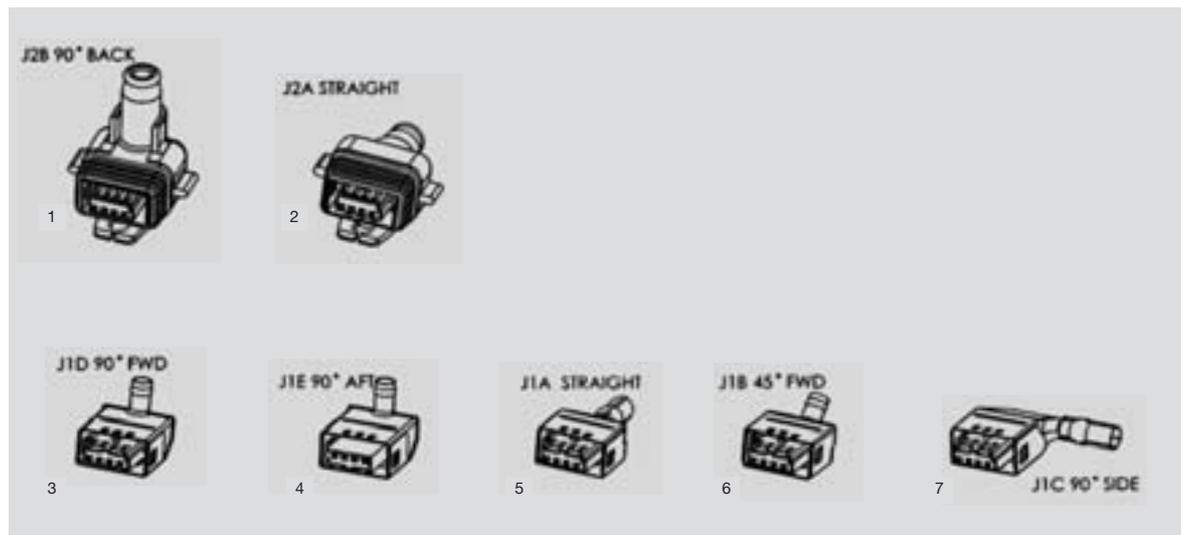
1) For operating an OSRAM D1 XENARC® electronic 35 W gas discharge lamp

# Connecting cable for control gear

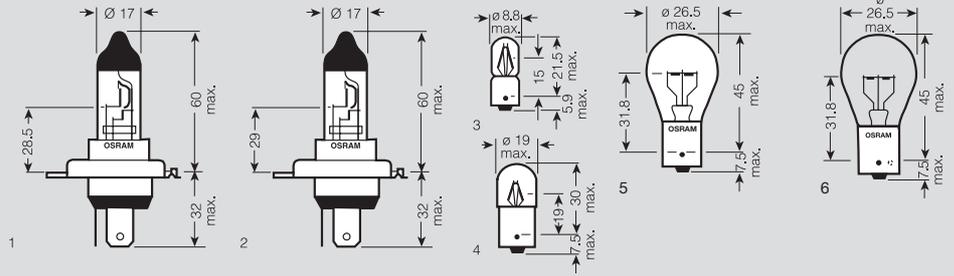


Product reference	Product number	 [mm]	 Lamp	 No.	 ECG	 No.	
<b>Cable for XENAELECTRON® control gear</b>							
Input Connector cable	4050300942797	900	–	–	–	–	10
32340 Connecting cable	4050300942704	390	J1A	5	J2A	2	40
32342 Connecting cable	4050300942711	540	J1A	5	J2A	2	40
32344 Connecting cable	4050300942728	390	J1A	5	J2B	1	40
32346 Connecting cable	4050300942735	150	J1A	5	J2B	1	40
32350 Connecting cable	4050300942742	280	J1B	6	J2B	1	40
32356 Connecting cable	4050300942759	170	J1C	7	J2B	1	40
32358 Connecting cable	4050300942766	300	J1C	7	J2B	1	40
32360 Connecting cable	4050300942773	240	J1D	3	J2A	2	40
32362 Connecting cable	4050300942780	800	J1D	3	J2B	1	40

Cable lengths up to 1.20 m.  
Other cable versions available on request.



# Headlight and auxiliary lamps



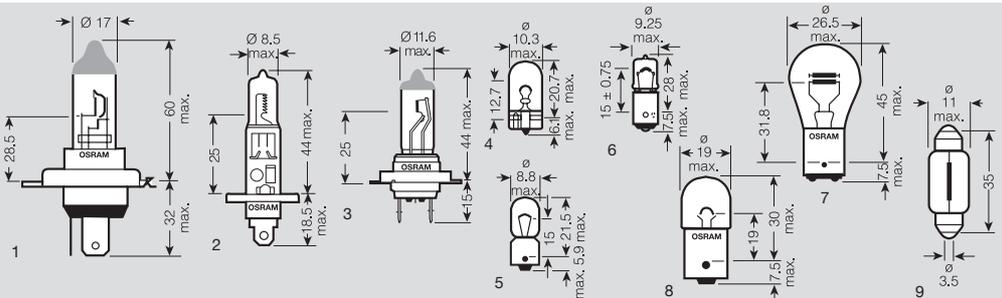
**OSRAM GIGANT® HEAVY-DUTY lamps** are intended primarily for vehicles with 24 V supplies such as vans, buses and HGVs. **GIGANT® HEAVY-DUTY lamps** have longer than normal replacement intervals, which reduces their operating costs – a distinct advantage particularly for professional users.

Product reference	Product number	E	K	ECE	V	W		No.	
<b>GIGANT® HEAVY-DUTY lamps</b> high vibration resistance and longer life									
94193	4050300019161	●		H4	12	60/55	P43t	1	100
94196	4050300250623	●		H4	24	75/70	P43t	2	100
9507	4050300173528	●		PY21W	24	21	BAU15s	6	200
9511	4050300173405	●		P21W	24	21	BA15s	5	200
9627	4050300171166	●		R5W	24	5	BA15s	4	200
9637	4050300171265	●		R10W	24	10	BA15s	4	200
9930	4050300517001	●		T4W	24	4	BA9s	3	200

**LIGHT@DAY™ lamps** (Daytime Running Light). Greater safety for the majority of the miles driven each year. The new **LIGHT@DAY™ lamps** from OSRAM enable car drivers to drive on low-beam headlights during the day without impairing the life of the light sources. These lamps increase safety considerably because the car is much more visible, for example in the shade and on roads through woodland. Scientific studies show that the number of head-on collisions is greatly reduced by daytime running lights. This is an enormous advantage considering the fact that more than 70 percent of all journeys are made in daylight.

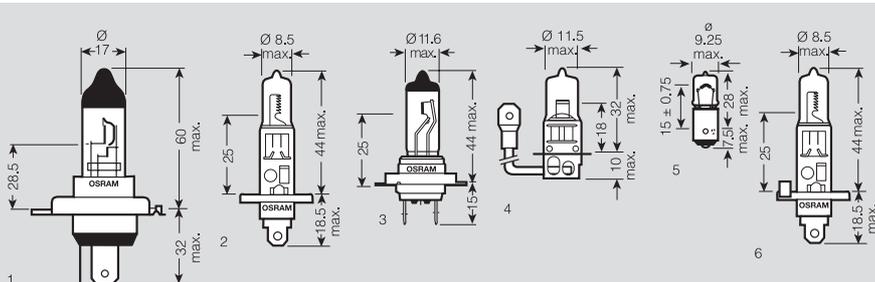
Product reference	Product number	E	K	ECE	V	W		No.	
<b>LIGHT@DAY™ lamps<sup>3)</sup> (Daytime Running Lights)</b> “Lights on” during the day for greater safety (longer life lamps)									
64193D <sup>2)</sup>	in preparation	●		H4	12	60/55	P43t	1	100
64150D <sup>1)</sup>	in preparation	●		H1	12	55	P14.5s	2	100
64210D <sup>1)2)</sup>	in preparation	●		H7	12	55	PX26d	3	100
2825D	in preparation	●		W5W	12	5	W2.1x9.5d	4	200
3893D	in preparation	●		T4W	12	4	BA9s	5	200
64132D	in preparation	●		H6W	12	6	BAX9s	6	200
7528D	in preparation	●		P21/5W	12	21/5	BAY15d	7	200
5007D	in preparation	●		R5W	12	5	BA15s	8	200
5008D	in preparation	●		R10W	12	10	BA15s	8	200
6418D	in preparation	●		C5W	12	5	SV8.5-8	9	200

New  
New  
New  
New  
New  
New  
New  
New  
New  
New



1) Lamps comply with ECE R 37 and SAE (DOT) regulations  
2) With silver cap  
3) Series with extended life

# Headlight and auxiliary lamps



Product reference	Product number	E	K	ECE	V	W	Light bulb icon	No.	Box icon
<b>The 12 V "High-Tech" (HT) OSRAM-LONGLIFE® range of automotive lamps</b>									
64132L	4050300458458	•		H6W	12	6	BAX9s	5	200
64150L <sup>1)</sup>	4050300351735	•		H1	12	55	P14.5s	2	100
64151L <sup>1)</sup>	4050300355276	•		H3	12	55	PK22s	4	100
64193L	4050300351704	•		H4	12	60/55	P43t	1	100
64210L <sup>1)</sup>	4050300332147	•		H7	12	55	PX26d	3	100
9003L <sup>1)</sup>	4050300308975	•		HB2/H4	12	60/55	P43t	1	100

Approved for use in the ECE area.

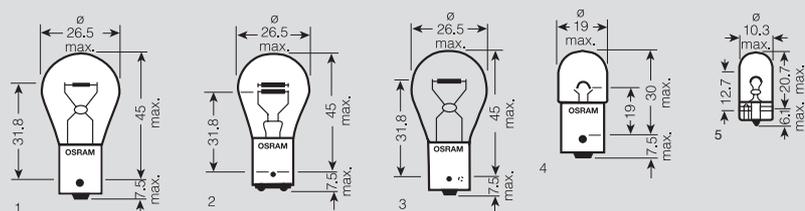
<b>Halogen headlight lamps for motor sports and off-road use</b>									
64152	4050300222738	-			12	100	PX14.5s	6	100
64153	4050300222837	-			12	100	PKY22s	4	100
64194	4050300225852	-			12	100/80	PU43t	1	100

Not approved for use on German roads or in areas covered by ECE.  
See also page 28

*Use of 100 W incandescent lamps is prohibited on the roads. With a 100 W incandescent lamp the holder loses its operating permit. The power draw for high-voltage incandescent lamps is considerably higher than that for standard lamps so there is a risk of cable fires. The increased heat from a 100 W incandescent lamp may destroy the reflector and diffuser. The guarantee from the headlight manufacturer will be null and void.*

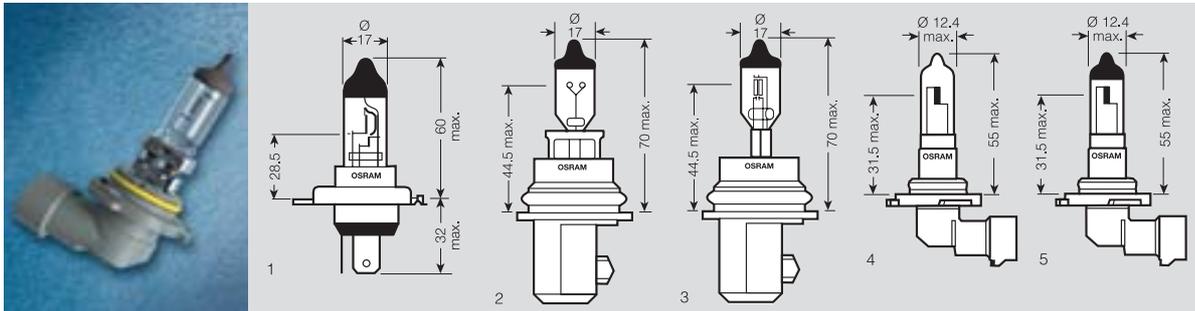
Product reference	Product number	E	K	ECE	V	W	Light bulb icon	No.	Box icon
<b>The 12 V "High-Tech" (HT) OSRAM-LONGLIFE® range of automotive lamps</b>									
2825L	4050300170091	•		W5W	12	5	W2.1x9.5d	5	200
5007L	4050300170985	•		R5W	12	5	BA15s	4	200
5008L	4050300171043	•		R10W	12	10	BA15s	4	200
7506L	4050300507194	•		P21W	12	21	BA15s	1	200
7507LDA	4050300539317	•		PY21W	12	21	BAU15s	3	200
7528L	4050300173863	•		P21/5W	12	21/5	BAY15d	2	200

**New**



<sup>1)</sup> Lamps comply with ECE R 37 and SAE (DOT) regulations  
See also self-service range

# SAE lamps



Product reference	Product number									
<b>SAE halogen headlight lamps with reduced UV emission</b>										
9003L <sup>1)</sup>	4050300308975	●		HB2/H4	HB2/H4	12	60/55	P43t	1	100
9003CB <sup>1)4)6)</sup>	4050300575179	●		HB2/H4	HB2/H4	12	60/55	P43t	without fig.	100
9003XV <sup>1)3)</sup>	4050300601366	●		HB2/H4	HB2/H4	12	60/55	P43t	1	100
9004	4050300239866			—	HB1	12	65/45	P29t	2	100
9005 <sup>1)</sup>	4050300012643	●		HB3	HB3	12	60	P20d	4	100
9005CB <sup>1)4)</sup>	4050300189673	●		HB3	HB3	12	60	P20d	without fig.	100
9006 <sup>1)</sup>	4050300012650	●		HB4	HB4	12	51	P22d	5	100
9006CB <sup>1)4)6)</sup>	4050300189697	●		HB4	HB4	12	51	P22d	without fig.	100
9007	4050300148816			—	HB5	12	65/55	PX29t	3	100
9055	4050300193991	●		H12	—	12	53	PZ20d	— <sup>2)</sup>	100
9145	4050300186320	●		H10	—	12	42	PY20d	— <sup>2)</sup>	100
<b>Other lamps for use in the SAE scope of validity</b>										
64150 <sup>1)</sup>	4050300001487	●		H1	H1	12	55	P14.5s	— <sup>5)</sup>	100
64151 <sup>1)</sup>	4050300001494	●		H3	H3	12	55	PK22s	— <sup>5)</sup>	100
64210 <sup>1)</sup>	4050300332185	●		H7	H7	12	55	PX26d	— <sup>5)</sup>	100
64211 <sup>1)</sup>	4050300524313	●		H11	H11	12	55	PGJ19-2	— <sup>2)</sup>	100
64212 <sup>1)</sup>	4050300498751	●		H8	H8	12	35	PGJ19-1	— <sup>2)</sup>	100
64213 <sup>1)</sup>	4050300524368	●		H9	H9	12	65	PGJ19-5	— <sup>2)</sup>	100
66040 <sup>1)</sup>	4050300375393	●		D2S	D2S	—	35	P32d-2	— <sup>7)</sup>	
66042 <sup>1)</sup>	4050300604657	●		D1S	D1S	—	35	PK32d-2	— <sup>7)</sup>	
66050 <sup>1)</sup>	4050300433486	●		D2R	D2R	—	35	P32d-3	— <sup>7)</sup>	
66052 <sup>1)</sup>	4050300604732	●		D1R	D1R	—	35	PK32d-3	— <sup>7)</sup>	
9005 XS <sup>1)</sup>		●		HB3A	HB3A	12	60	P20d	— <sup>2)</sup>	100
9006 XS <sup>1)</sup>	4050300532400	●		HB4A	HB4A	12	51	P22d	— <sup>2)</sup>	100

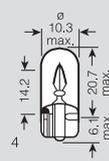
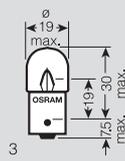
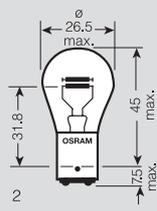
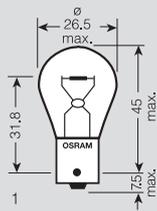
New 4000K

New 4000K

1) Lamps comply with ECE R 37 and SAE (DOT) regulations  
 2) See page 12  
 3) SUPER version with up to 30% higher luminance  
 4) COOL BLUE® version

5) See page 11  
 6) With silver cap  
 7) Cf. page 13  
 See also self-service range

# SAE lamps



Product reference

Product number



## SAE lamps for indicator, brake and tail lights

1073 <sup>1)</sup>		—	S8	12.8	1.8	BA15s	1	1000
1156	4050300173542	—	S8	12.8	2.1	BA15s	1	200
1157	4050300173924	—	S8	12.8-14	2.1/0.59	BAY15d	2	200

## SAE lamps for side lights, tail lights and number plates

67	4050300267203	—	G6	13.5	0.59	BA15s	3	800
97	4050300213330	—	G6	13.5	0.69	BA15s	3	800

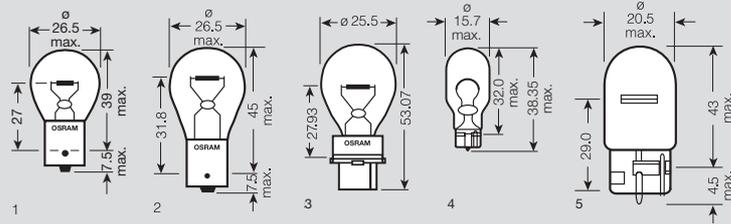
## SAE glass-base lamps

168	4050300148847	—	T31/4	12	0.35	W2.1x9.2d	4	4000
194 <sup>1)</sup>		—	T31/4	12	0.27	W2.1x9.2d	4	4000



1) On request  
See also self-service range

# Lamps for auxiliary lights



Product reference

Product number



## Indicator and brake light lamps

Product reference	Product number	E	K	ECE	V	W	Lamp icon	No.	Box icon
3156	4050300163536	●		P27W	12	27	W2.5x16d	3	1000
7501	4050300173665	●		P21W	6	21	BA15s	2	200
7505	4050300556437	●		W21W	12	21	W3x16d	5	200
7506	4050300173221	●		P21W	12	21	BA15s	2	200
7511	4050300173368	●		P21W	24	21	BA15s	2	200
7526	4050300173689		●		6	18	BA15s	1	200
7527	4050300173702		●		12	18	BA15s	1	200
7529	4050300173726				24	15	BA15s	1	200
7535	4050300173788		●		24	18	BA15s	1	200
921	4050300194844	●		W16W	12	16	W2.1x9.5d	4	1000

Product reference

Product number



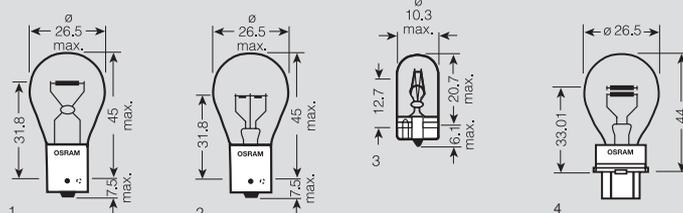
## Amber-coated lamps for clear indicators

Product reference	Product number	E	K	ECE	V	W	Lamp icon	No.	Box icon
2827	4050300170114	●		WY5W	12	5	W2.1x9.5d	3	200
3757AK <sup>1)</sup>		●		PY27/7W	12	27/7	WX2.5x16q	4	1000
7507	4050300173481	●		PY21W	12	21	BAU15s	1	200
9507	4050300173528	●		PY21W	24	21	BAU15s	2	200

## DIADEM® signal lamp with interference coating in amber for clear indicators

**New**

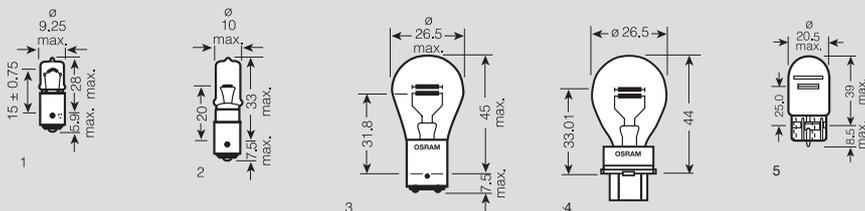
7507 LDA	4050300539317	●		PY21W	12	21	BAU15s	1	200
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DIADEM® lamps are manufactured with the latest interference coating so the surface of the DIADEM® has an opal effect. The lamp only appears amber when it is on.

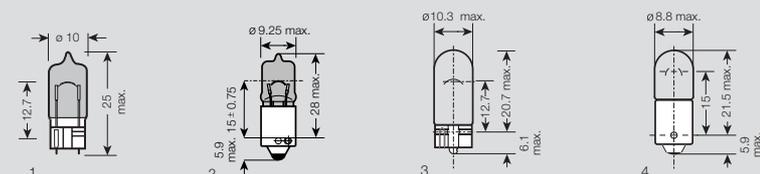
<sup>1)</sup> On request  
See also self-service range

# Lamps for auxiliary lights



Product reference	Product number	E	K	ECE	V	W		No.	
<b>Halogen parking lamps and indicator lamps</b>									
64132 <sup>1)</sup>	4050300171746	•		H6W	12	6	BAX9s	1	200
64136 <sup>1)</sup>	4050300171807	•		H21W	12	21	BAY9s	2	200
64138 <sup>1)</sup>	4050300171821	•		H21W	24	21	BAY9s	2	200
<b>Brake and tail light lamps</b>									
3157	4050300163529	•		P27/7W	12	27/7	W2.5x16q	4	1000
7231	4050300607726				12	18/5	BAY15d	3	200
7244	4050300173962				24	18/5	BAY15d	3	200
7515	4050300556451	•		W21/5W	12	21/5	W3x16q	5	200
7528	4050300514215	•		P21/5W	12	21/5	BAY15d	3	200
7537	4050300173900	•		P21/5W	24	21/5	BAY15d	3	200
<b>Rear fog light and tail light lamps</b>									
7225	4050300173825	•		P21/4W	12	21/4	BAZ15d	3	200

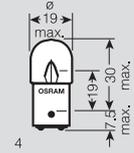
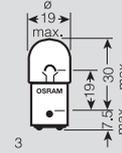
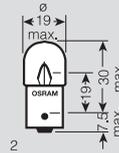
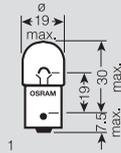
Product reference	Product number	E	K	ECE	V	W		No.	
<b>COOL BLUE® for parking and interior lighting</b>									
2825CB	4050300900476	•		W5W	12	5	W2.1x9.5d	3	200
2825HCB	4050300600864	•		W5W	12	5	W2.1x9.5d	1	200
3893CB	4050300636320	•		T4W	12	4	BA9s	4	200
64132CB	4050300598239	•		H6W	12	6	BAX9s	2	200 <sup>1)</sup>



Upgrade the look of your car with COOL BLUE® parking lights. Use cool white light to stand out from the crowd.

<sup>1)</sup> Reduced UV emission  
See also self-service range

# Lamps for auxiliary lights



Product reference

Product number

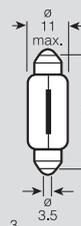
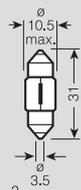
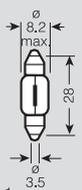


## Tail light and number plate lamps lamps for interior lighting

5001	4050300173320	•	R10W	6	10	BA15s	1	200
5006	4050300171302	•	R5W	6	5	BA15s	1	200
5007	4050300169415	•	R5W	12	5	BA15s	1	200
5008	4050300513539	•	R10W	12	10	BA15s	1	200
5407 <sup>1)</sup>	4050300171326	•	R5W	12	5	BA15d	3	200
5626 <sup>1)</sup>	4050300171340	•	R5W	24	5	BA15d	4	200
5627	4050300173283	•	R5W	24	5	BA15s	2	200
5637	4050300171203	•	R10W	24	10	BA15s	2	200

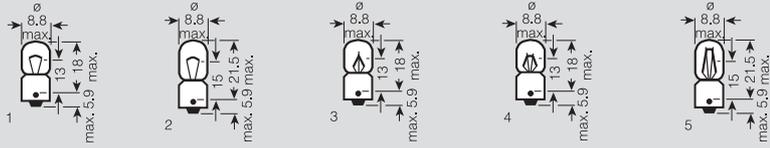
## Festoon lamps

6411	4050300513607	•		12	10	SV8.5-8	3	200
6413	4050300172842			12	5	SV8.5-8	3	200
6416	4050300172866	•	C5W	6	5	SV8.5-8	4	200
6418	4050300513621	•	C5W	12	5	SV8.5-8	4	200
6423	4050300172729	•	C5W	24	5	SV8.5-8	4	200
6424	4050300172903			24	5	SV8.5-8	3	200
6428	4050300171487			12	3	SV7-8	1	200
6429	4050300172941			24	10	SV8.5-8	3	200
6430	4050300171531			24	3	SV7-8	1	200
6438	4050300171425			12	10	SV8.5-8	2	200
6450	4050300524146	•		6	10	SV8.5-8	3	200
6451	4050300173023			12	15	SV8.5-8	5	200
6453	4050300173085			24	15	SV8.5-8	5	200
6461	4050300173122			12	10	SV8.5-8	4	200
6475	4050300172606	•		12	18	SV8.5-8	5	200
6476	4050300172644	•	C21W	12	21	SV8.5-8	5	200
6480	4050300173160	•		24	18	SV8.5-8	5	200
6486X	4050300172767			12	6	SV8.5-8	4	200



<sup>1)</sup> Only for special vehicles for which double-pole insulated cable is prescribed  
See also self-service range

# Lamps for auxiliary lights

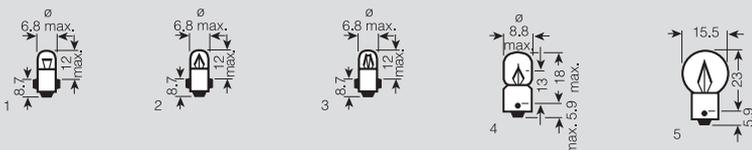


Product reference	Product number	E	K	ECE	V	W	Light bulb icon	No.	Box icon
<b>Parking light lamps and lamps for interior lighting</b>									
3796	4050300516844						BA9s	3	200
3797	4050300516905						BA9s	4	200
3860	4050300270326						BA9s	2	200
3892	4050300172347			T4W			BA9s	2	200
3893	4050300516882			T4W			BA9s	2	200
3895	4050300172385						BA9s	1	200
3930	4050300516929			T4W			BA9s	5	200



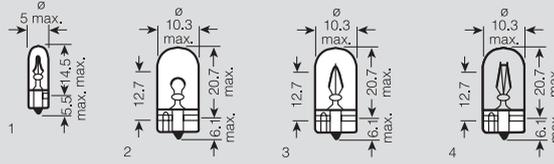
**OSRAM signal lamps have small dimensions but maximum impact.**

Product reference	Product number	E	K	V	W	Light bulb icon	No.	Box icon	
<b>Signal lamps</b>									
3798 <sup>1)</sup>	4050300170374						BA7s	1	200
3799 <sup>1)</sup>	4050300170398						BA7s	1	200
3894	4050300172361						BA9s	4	200
3898	4050300170435						BA7s	2	200
3899	4050300516820						BA7s	3	200
6253	4050300170947						BA9s	5	200



<sup>1)</sup> Discontinued  
See also self-service range

# Lamps for auxiliary lights



Product reference	Product number	COLOR	E	K	ECE	V	W		No.	
<b>Glass-base lamps</b>										
2721	4050300169378					12	1.2	W2x4.6d	1	200
2722	4050300169897					12	2	W2x4.6d	1	200
2723	4050300169910		•		W2.3W	12	2.3	W2x4.6d	1	200
2731	4050300409559					12	1.5	W2x4.6d	1	6000
2741	4050300169859					24	1.2	W2x4.6d	1	200
2820	4050300170138			•		12	2	W2.1x9.5d	2	200
2821	4050300170152		•		W3W	12	3	W2.1x9.5d	3	200
2825	4050300514307		•		W5W	12	5	W2.1x9.5d	2	200
2826 <sup>1)</sup>	4050300250014		•		W5W	12	5	W2.1x9.5d	2	3600
2827 <sup>2)</sup>	4050300170114		•		WY5W	12	5	W2.1x9.5d	4	200
2840	4050300170251			•		24	2	W2.1x9.5d	3	200
2841	4050300170299		•		W3W	24	3	W2.1x9.5d	3	200
2845	4050300170312		•		W5W	24	5	W2.1x9.5d	3	200

<b>MINIWATT® glass-base lamps with welded plastic bases</b>										
2721MF <sup>4)</sup>	4050300170589	Jet black				12	1.2	B8.5d	2	200
2722MF <sup>4)</sup>	4050300170688	Lime green				12	2	B8.5d	2	200
2741MF <sup>4)</sup>	4050300170725	Slate grey				24	1.2	B8.5d	2	200
2752MF	4050300170800	Beige				12	1.5	B8.5d	2	200
2322MFX	4050300938202	Indigo				12	0.4	BX8.5d	2	200
2351MFX6	4050300170824	Jet black				12	1.2	BX8.4d	1	200
2352MFX6	4050300170848	Pale green				12	2	BX8.4d	1	200
2431MFX6 <sup>3)</sup>	4050300638416	Olive green				12	1.3	BX8.4d	1	200
2452MFX6	4050300170862	Beige				12	1.5	BX8.4d	1	200
2473MFX6	4050300170886	Pastel orange				12	1.1	BX8.4d	1	200
2721MF8	4050300170664	Jet black				12	1.2	B8.3d	3	200
2722MF8	4050300172682	Pure white				12	2	B8.3d	3	200
2741MF8	4050300170787	Slate grey				24	1.2	B8.3d	3	200
2721MF8W	4050300479880	Slate grey				12	1.2	B8.7d	4	200

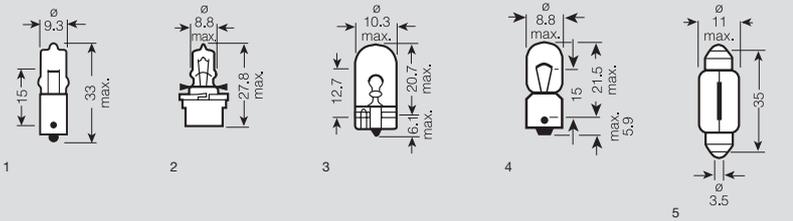
Other MINIWATT® glass-base lamps with special plastic lamp-holders are available on request.



1) Heat-resistant  
2) Amber lamp for clear side indicators  
3) LCL = 9.2 mm

4) Also available as an MFX version for 1.5 mm printed circuit boards  
See also self-service range

# Lamps for auxiliary lights



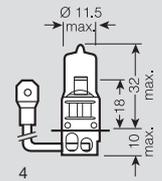
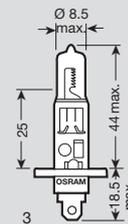
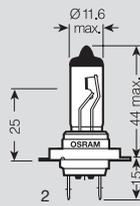
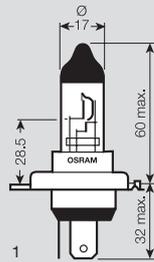
Product reference	Product number	V	W		No.	
<b>MINIWATT® halogen lamps with hard-glass bulbs for interior lighting</b>						
64111 <sup>1)</sup>	4050300171579	12	5	BA9s	1	200
64113 <sup>1)</sup>	4050300171616	12	10	BA9s	1	200
64115	4050300171630	12	20	BA9s	1	200
<b>For display backlighting with plastic lampholder</b>						
64122MF <sup>2)</sup>	4050300171661	12	3	B10d	2	200
64124MF <sup>2)</sup>	4050300171708	12	5	B10d	2	200
<b>MINIXEN® xenon-filled lamps with high luminous efficacy for interior lighting</b>						
2886X	4050300170237	12	6	W2.1x9.5d	3	200
3886X	4050300517551	12	6	BA9s	4	200
6486X	4050300172767	12	6	SV8.5-8	5	200

*With their compact design, impressive economy and brilliant light, MINIXEN® lamps can be used anywhere inside the car.*



1) Also available with glass base. Product reference 6411150 or 6411350  
 2) With plastic lampholder MF for printed circuit boards 2 mm thick; also available with MFX lampholder for 1.5 mm printed circuit boards  
 See also self-service range

# Lamps for two-wheeled vehicles



Product reference

Product number



## Motorcycle headlight lamps

Halogen BILUX® hard-glass lamps

64185	4050300230887	●	HS1	12	35/35	PX43t	1	100
64193	4050300001470	●	H4	12	60/55	P43t	1	100

Halogen BILUX® H4 heavy-duty GIGANT®

94193	4050300019161	●	H4	12	60/55	P43t	1	100
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Halogen single-filament headlight lamps

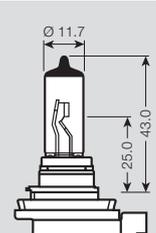
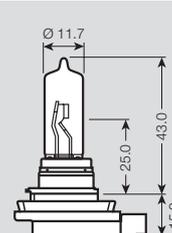
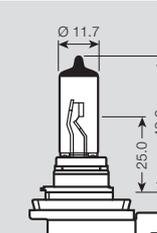
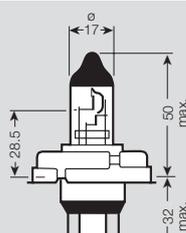
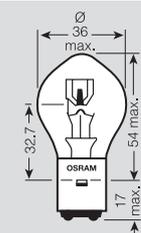
64150	4050300001487	●	H1	12	55	P14.5s	3	100
64151	4050300001494	●	H3	12	55	PK22s	4	100
64210	4050300332185	●	H7	12	55	PX26d	2	100
64211	4050300524313	●	H11	12	55	PGJ19-2	9	100
64211SUP <sup>2)</sup>	4050300530727	●	H11	12	55	PGJ19-2	9	100
64212	4050300498751	●	H8	12	35	PGJ19-1	7	100
64213	4050300524368	●	H9	12	65	PGJ19-5	8	100

BILUX® AS® HALOROAD® R2 halogen lamps

64183 <sup>1)</sup>	4050300350554	●	R2	12	45/40	P45t	6	100
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BILUX® lamps

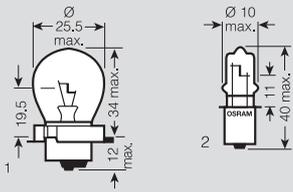
7323	4050300016351	●	S1	6	25/25	BA20d	5	100
7324	4050300016368	●	S2	6	35/35	BA20d	5	100
7326	4050300271248	●	S1	12	25/25	BA20d	5	100
7327	4050300016375	●	S2	12	35/35	BA20d	5	100



The lamps shown on page 10 ff. are also approved for use on motorcycles.  
1) Successor to BILUX® AS® R2 (7951)

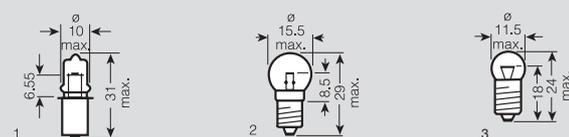
2) H11 with increased luminance  
See also self-service range

# Lamps for two-wheeled vehicles



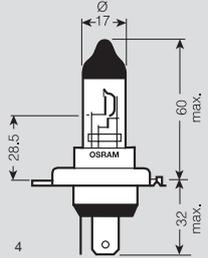
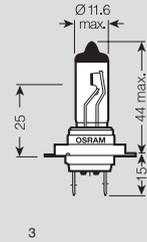
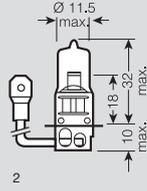
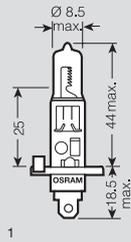
Product reference	Product number	E.	K	ECE	V	W		No.	
<b>Moped headlight lamps, conventional lamps</b>									
Conventional design									
7130	4050300016344	•		S3	6	15	P26s	1	200
7135	4050300213507	•		S3	12	15	P26s	1	200
Halogen lamps									
64130	4050300230672	•		HS2	6	15	PX13.5s	2	200
64131	4050300233857	•		HS2	12	15	PX13.5s	2	200

Product reference	Product number	E.	K	ECE	V	W		No.	
<b>Bicycle headlight and tail light lamps and for motorised bicycles with 3W supplies to DIN 49848</b>									
Halogen hard-glass headlight lamps									
64100	4050300171555	•		HS3	6	2.4	PX13.5s	1	200
Conventional headlight lamps									
3724	4050300170909	•		C2.4W <sup>1)</sup>	6	2.4	EP10	2	200
Tail light lamps									
3708	4050300170336	•		C0.6W <sup>1)</sup>	6	0.6	E10	3	200



1) To IEC  
See also self-service range

# Lamps for motor sport



*Use of 100 W incandescent lamps is prohibited on the roads. With a 100 W incandescent lamp the holder loses its operating permit. The power draw for high-voltage incandescent lamps is considerably higher than that for standard lamps so there is a risk of cable fires. The increased heat from a 100 W incandescent lamp may destroy the reflector and diffuser. The guarantee from the headlight manufacturer will be null and void.*

Product reference

Product number



## Headlight lamps for motor sport or export outside Europe (without ECE approval)

62200	4050300247854	—	(H1)	12	100 <sup>1)</sup>	P14.5s	1	100
64152	4050300222738	—	(H1)	12	100 <sup>1)</sup>	PX14.5s	1	100
62201	4050300247939	—	(H3)	12	100 <sup>2)</sup>	PK22s	2	100
62205	4050300139371	—	(H3)	12	110 <sup>1)</sup>	PKY22s	2	200
64153	4050300222837	—	(H3)	12	100 <sup>2)</sup>	PKY22s	2	100
64217	4050300524399	—	(H7)	12	65	PX26d	3	100
62203	4050300247960	—	(H4)	12	100/80	P43t	4	100
64194	4050300225852	—	(H4)	12	100/80	PU43t	4	100

All lamps without ECE or StVZO approval. Check national law.



1) Actual power draw 93 W  
2) Actual power draw 85 W

## Self-service range

Code no.	Blister no.	ECE cat.	Product number	Lamp application	Voltage	Wattage	Base	St. pack blisters/lamps
<b>12 V headlight lamps</b>								
1	64193-01B	H4	4050300 <b>925127</b>	Main halogen headlight	12	60/55	P43t	20/20
1B	64193ALS-01B	H4	<sup>1)</sup>	ALLSEASON SUPER	12	60/55	P43t	20/20
1C	64193SUP-01B	H4	4050300 <b>925165</b>	SUPER	12	60/55	P43t	20/20
1D	64193CB-01B	H4	4050300 <b>925189</b>	COOL BLUE	12	60/55	P43t	20/20
1E	64193SVS-01B	H4	4050300 <b>647661</b>	SILVERSTAR	12	60/55	P43t	20/20
1F	64193D-01B	H4	In preparation	LIGHT@DAY	13	60/56	P43t	20/20
2	64210-01B	H7	4050300 <b>925202</b>	Main/aux. halogen headlight	12	55	PX26d	20/20
2A	64210ALL-01B	H7	<sup>1)</sup>	ALLSEASON	12	55	PX26d	20/20
2D	64210CB-01B	H7	4050300 <b>925240</b>	COOL BLUE	12	55	PX26d	20/20
2E	64210SVS-01B	H7	4050300 <b>647623</b>	SILVERSTAR	12	55	PX26d	20/20
2F	64210D-01B	H7	In preparation	LIGHT@DAY	12	55	PX26d	20/20
3	64150-01B	H1	4050300 <b>925264</b>	Main halogen headlight	12	55	P14.5s	20/20
3B	64150ALS-01B	H1	<sup>1)</sup>	ALLSEASON SUPER	12	55	P14.5s	20/20
3C	64150SUP-01B	H1	4050300 <b>925301</b>	SUPER	12	55	P14.5s	20/20
3D	64150CB-01B	H1	4050300 <b>925325</b>	COOL BLUE	12	55	P14.5s	20/20
3E	64150SVS-01B	H1	4050300 <b>648354</b>	SILVERSTAR	12	55	P14.5s	20/20
3F	64150D-01B	H1	In preparation	LIGHT@DAY	12	55	P14.5s	20/20
4	64151-01B	H3	4050300 <b>925349</b>	Aux. halogen headlight	12	55	PK22s	20/20
4B	64151ALS-01B	H3	<sup>1)</sup>	ALLSEASON SUPER	12	55	PK22s	20/20
4C	64151SUP-01B	H3	4050300 <b>925387</b>	SUPER	12	55	PK22s	20/20
5	64183-01B	R2	4050300 <b>925400</b>	Main halogen headlight (replacement for 7951)	12	45/40	P45t	20/20
6	7951-01B	R2	4050300 <b>925424</b>	Conventional technology Main headlight	12	45/40	P45t	20/20
<b>12 V auxiliary lamps</b>								
7	7506-02B	P21W	4050300 <b>925448</b>	Indicator, brake light	12	21	BA15s	20/40
8	7507-02B	PY21W	4050300 <b>925462</b>	Indicator/orange	12	21	BAU15s	20/40
8A	7507LDA-02B	PY21W	4050300 <b>925486</b>	DIADEM indicator/orange	12	21	BAU15s	20/40
10	7527-02B		4050300 <b>925509</b>	Indicator, brake light	12	18	BA15s	20/40
11	7528-02B	P21/5W	4050300 <b>925523</b>	Indicator and tail light	12	21/5	BAY15d	20/40
11F	7528D-02B	P21/5W	In preparation	LIGHT@DAY: brake and tail light	12	21/5	BAY15d	20/40
12	7225-02B	P21/4W	4050300 <b>925547</b>	Tail light/rear fog light	12	21/4	BAZ15d	20/40
13	7231-02B		4050300 <b>925561</b>	Brake/tail light	12	18/5	BAY15d	20/40
14	5007-02B	R5W	4050300 <b>925585</b>	Tail light and number plate light	12	5	BA15s	20/40
14F	5007D-02B	R5W	In preparation	LIGHT@DAY: tail light and number plate light	12	5	BA15s	20/40
16	5008-02B	R10W	4050300 <b>925608</b>	Tail light and number plate light	12	10	BA15s	20/40
16F	5008D-02B	R10W	In preparation	LIGHT@DAY: tail light and number plate light	12	10	BA15s	20/40
18	6418-02B	C5W	4050300 <b>925622</b>	Tail light and number plate light	12	5	SV8.5-8	20/40
18F	6418D-02B	C5W	In preparation	LIGHT@DAY: tail light and number plate light	12	5	SV8.5-8	20/40
19	6411-02B	C10W	4050300 <b>925646</b>	Interior light	12	10	SV8.5-9	20/40
20	3893-02B	T4W	4050300 <b>647609</b>	Parking light	12	4	BA9s	20/40
20D	3893CB-02B	T4W	4050300 <b>925660</b>	Parking light COOL BLUE	12	4	BA9s	20/40
20F	3893D-02B	T4W	In preparation	Parking light LIGHT@DAY	12	4	BA9s	20/40
21	2825-02B	W5W	4050300 <b>925684</b>	Parking light LIGHT@DAY	12	5	W2.1x9.5d	20/40
21D	2825HCB-02B	W5W	4050300 <b>925707</b>	Halogen parking light COOL BLUE	12	5	W2.1x9.5d	20/40
21E	2825CB-02B	W5W	4050300 <b>925721</b>	Parking light/interior lighting	12	5	W2.1x9.5d	20/40
21F	2825D-02B	W5W	In preparation	LIGHT@DAY: parking light/interior lighting	12	5	W2.1x9.5d	20/40
22	2821-02B	W3W	4050300 <b>925745</b>	Display light	12	3	W2.1x9.5d	20/40
23	2721-02B		4050300 <b>925769</b>	Display light	12	1,2	W2x4.6d	20/40
24	2722-02B		4050300 <b>925783</b>	Display light	12	1,2	W2x4.6d	20/40

1) On request

## Self-service range

Code no.	Blister no.	ECE cat.	Product number	Lamp application	Voltage	Wattage	Base	St. pack blisters/lamps
<b>12 V auxiliary lamps</b>								
25	64111-02B		4050300925806	Reading light	12	5	BA9s	20/40
26D	64132CB-02B	H6W	4050300925820	Halogen parking light COOL BLUE	12	6	BAX95	20/40
26F	64132D-02B	H6W	In preparation	LIGHT@DAY: halogen parking light	12	6	BAX95	20/40
<b>24 V headlight lamps</b>								
24V	64155-01B	H1	4050300925844	Main halogen headlight	24	70	P14.5s	20/20
24V	64156-01B	H3	4050300565811	Auxiliary headlight	24		PK22s	20/20
24V	64196-01B	H4	4050300925868	Main halogen headlight	24	75/70	P43t	20/20
24V	64215-01B	H7	4050300925882	Main halogen headlight	24	70	PX26d	20/20
24V	7952-01B	R2	4050300925905	Main halogen headlight – conv. techn.	24	55/50	P45t	20/20
<b>24 V auxiliary lamps</b>								
24V	7511-02B	P21W	4050300925929	Indicator, brake, reversing light	24	21	BA15s	20/40
24V	7537-02B	P21/5W	4050300925943	Brake and tail light	24	4	BAY15d	20/40
24V	5627-02B	R5W	4050300925967	Tail light, number plate light	24	5	BA15s	20/40
24V	6423-02B	C5W	4050300925981	Tail light, number plate light	24	5	SV8.5-8	20/40
24V	3930-02B		4050300926001	Parking light	24	4	BA9s	20/40
24V	2841-02B	W3W	4050300926025	Display light	24	3	W2.1x9.5d	20/40
24V	5637-02B	R10W	4050300926049	Tail light, number plate light	24	10	BA15s	20/40

*The new self-service packs: much better information for customers and much better use of shelf space.*



# Spare lamp kits for cars

## OSRAM universal car lamp kits 12 V (Eurobox)

**H4** car lamp kit for all 12 V models with halogen BILUX H4 headlights, equipped with 5 lamps:

**Product number**

64193 H4	Main halogen headlight	4050300 <b>940755</b>
7506 P21W	Brake and tail light	
7507 PY21W	Indicator/orange	
7528 P21/5W	Brake/tail light	
5007 R5W	Tail light and number plate light	
2825 W5W	Parking light	
15A	Fuse	
20A	Fuse	
30A	Fuse	

**H1** car lamp kit for all 12 V models with halogen H1 headlights, equipped with 5 lamps:

**4050300940762**

64150 H1	Main halogen headlight	4050300 <b>940762</b>
7506 P21W	Brake and tail light	
7507 PY21W	Indicator/orange	
7528 P21/5W	Brake/tail light	
5007 R5W	Tail light and number plate light	
2825 W5W	Parking light	
15A	Fuse	
20A	Fuse	
30A	Fuse	

**H7** car lamp kit for all 12 V models with halogen H7 headlights, equipped with 5 lamps:

**4050300940779**

64210 H7	Main halogen headlight	4050300 <b>940779</b>
7506 P21W	Brake and tail light	
7507 PY21W	Indicator/orange	
7528 P21/5W	Brake/tail light	
5007 R5W	Tail light and number plate light	
2825 W5W	Parking light	
15A	Fuse	
20A	Fuse	
30A	Fuse	

**H7/H1** car lamp kit for all 12 V models with halogen H7 headlights, equipped with 6 lamps:

**4050300940748**

64210 H7	Main halogen headlight	4050300 <b>940748</b>
64150 H1	Main halogen headlight	
7506 P21W	Brake and tail light	
7507 PY21W	Indicator/orange	
7528 P21/5W	Brake/tail light	
5007 R5W	Tail light and number plate light	
2825 W5W	Parking light	
15A	Fuse	
20A	Fuse	
30A	Fuse	

**R2** car lamp kit for all 12 V models without halogen headlights, equipped with 5 lamps:

**4050300940786**

7951 R2	Main halogen headlight, conventional technology	4050300 <b>940786</b>
7506 P21W	Brake and tail light	
7507 PY21W	Indicator/orange	
7528 P21/5W	Brake/tail light	
5007 R5W	Tail light and number plate light	
2825 W5W	Parking light	
15A	Fuse	
20A	Fuse	
30A	Fuse	

*This useful spare lamp kit for cars is already compulsory in many countries.*

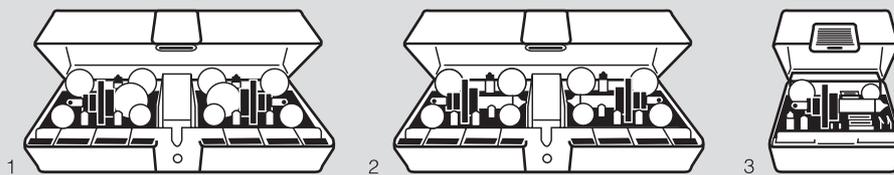
*Spare lamp kit for cars:  
Contains the most important lamps*

- *Innovative design*
- *Attractive shape and size*

## Spare lamp kits for cars

## Spare lamp kits for trucks and buses

*Spare lamp kit for trucks and buses: Made of impact-resistant polystyrene. Measures only 205 x 56 x 96 mm and can hold 20 lamps including two halogen H1 or H3 lamps plus various fuses.*



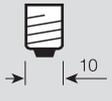
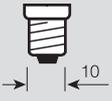
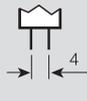
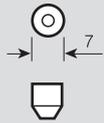
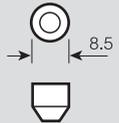
### Spare lamp kits for trucks and buses

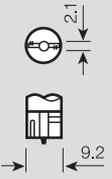
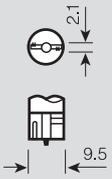
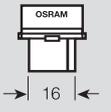
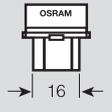
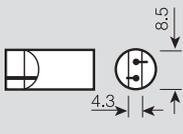
		Product number
<b>ALB 345/12 U</b> Universal spare lamp kit for 12 V vehicles with BILUX® AS® headlights. Contains 18 lamps: 2x7951, 2x3893, 2x5007, 2x5008, 4x7506, 2x3796, 2x6411, 2x2721	Fig. 1	1)
<b>ALB 345/24 U</b> Universal spare lamp kit for 24 V vehicles with BILUX® AS® headlights. Contains 18 lamps: 2x7952, 2x3930, 4x7511, 4x5637, 4x3797, 2x6423	Fig. 1	1)
<b>ALB 346/12 U</b> Universal spare lamp kit for 12 V vehicles with BILUX® H4 headlights. Contains 18 lamps: 2x64193, 2x3893, 2x5007, 2x5008, 4x7506, 2x3796, 2x6411, 2x2721	Fig. 2	1)
<b>ALB 346/24 U</b> Universal spare lamp kit for 24 V vehicles with BILUX® H4 headlights. Contains 18 lamps: 2x64196, 2x3930, 4x7511, 4x5637, 4x3797, 2x6423	Fig. 2	1)
<b>ALB 446/24 U</b> Spare lamp kit for 24 V vehicles with BILUX® H4 headlights. Contains 6 lamps: 64196, 3930, 7511, 5637, 6423, 5627	Fig. 3	1)
<b>ALB 346/24 HD GIGANT®</b> Shock-resistant heavy-duty lamps. Long service life. Specially developed for 24 V HGVs with BILUX® H4 headlights. Contains 16 lamps: 2x64196, 4x9930, 6x9511, 4x9637	Fig. 2	1)
<b>ALB 446/24 HD</b> Shock-resistant heavy-duty lamps. Long service life. Specially developed for 24 V HGVs with BILUX® H4 headlights. Contains 5 lamps: 94196, 9930, 9511, 9637, 9627	Fig. 3	1)

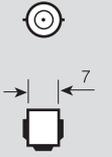
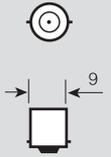
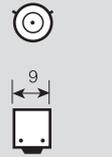
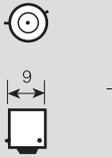
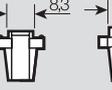
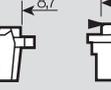
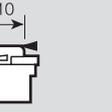


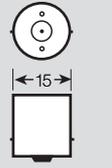
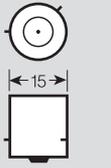
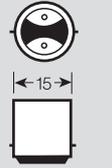
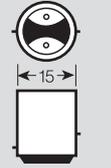
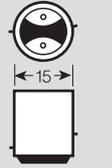
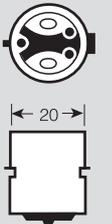
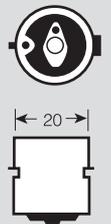
1) On request

# Summary of bases and lampholder standards

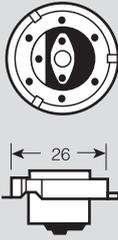
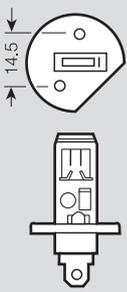
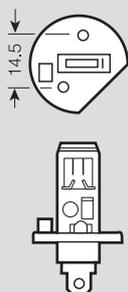
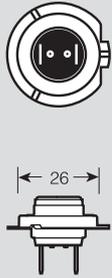
				
E10 IEC 7004-22 DIN 49610	EP10 IEC 7004-30 DIN 49701	G4 IEC 7004-72 DIN 49757	SV7-8 IEC 7004-80 DIN 49705 T1	SV8.5-8 IEC 7004-81 DIN 49705 T2
Lampholder standard: IEC 7005-20	IEC 7005-30 DIN 49642 T27	IEC 7005-72	IEC 7005-80 DIN 49767	IEC 7005-80 DIN 49767

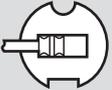
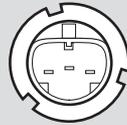
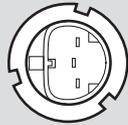
					
W2x4.6d IEC 7004-94 DIN 49632 T1	W2.1x9.2d	W2.1x9.5d IEC 7004-91 DIN 49632 T2	W2.5x16d	W2.5x16q	W4.3x8.5
Lampholder standard: IEC 7005-94 DIN 49642 T2		IEC 7005-91 DIN 49642 T4			

								
BA7s IEC 7004-15 DIN 49710	BA9s IEC 7004-14 DIN 49715	BAY9s DIN 49640	BAX9s DIN 49640	B8.4-12.5 BX8.4-12.5	B8.5d BX8.5d	B8.3d	B8.7d	B10d-14.5 BX10d-14.5
Lampholder standard: IEC 7005-11 DIN 49642 T11	IEC 7005-12 DIN 49642 T12							

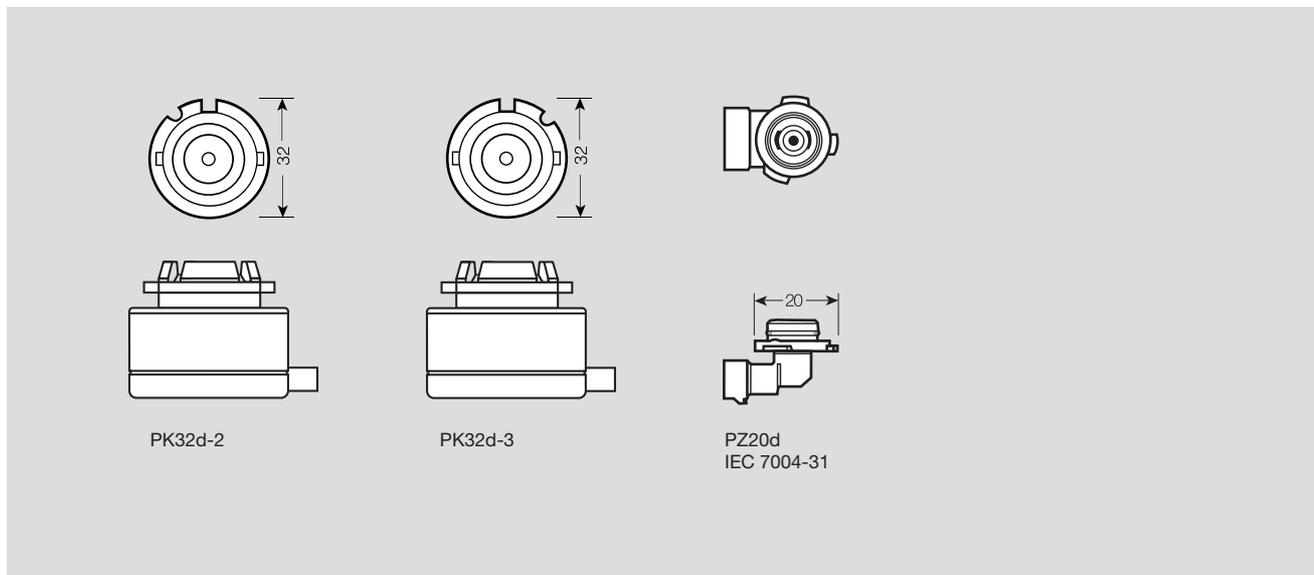
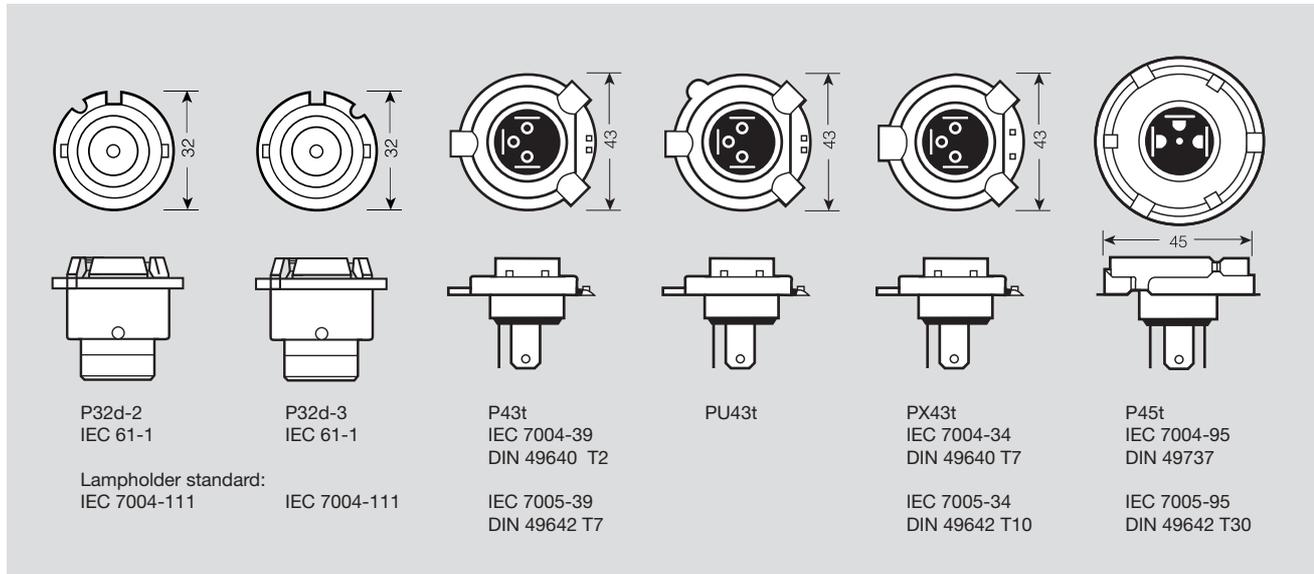
						
BA15s IEC 7004-13 DIN 49720 T1	BAU15s IEC 7004-19 DIN 49720 T5	BA15d IEC 7004-13 DIN 49720 T1	BAY15d IEC 7004-11 B DIN 49720 T2	BAZ15d DIN 49720 T4	BA20d IEC 7004-12 DIN 49730	BA20s IEC 7004-12 DIN 49730
Lampholder standard: IEC 7005-13 DIN 49642 T6	IEC 7005-13 DIN 49642 T8	IEC 7005-13 DIN 49642 T6	IEC 7005-13 DIN 49642 T6		IEC 7005-14 DIN 49735	IEC 7005-14 DIN 49735

# Summary of bases and lampholder standards

					
P26s IEC 7004-36 DIN 49727	PX13.5s IEC 7004-35 DIN 49640 T 5	P14.5s IEC 7004-46 DIN 49738	PX14.5s	PX26d IEC 7004-5-1	X511 IEC 7004-99 DIN 49640 T1
Lampholder standard: IEC 7005-36 DIN 49642 T2	Lampholder standard: IEC 7005-35 DIN 49642 T5	IEC 7005-46 DIN 49739			IEC 7005-99 DIN 49642 T2

							
PK22s IEC 7004-47 DIN 49742	PKY22s	PGJ 19 PGJ 19-1 PGJ 19-2 PGJ 19-5	P20d	PY20d	P22d	P29t	PX29t
Lampholder standard: IEC 7005-47 DIN 49762							

# Summary of bases and lampholder standards





# Glossary of the most important lighting terms

Type summary by rated voltage

Type summary by reference numbers

Type summary by ECE/SAE standard

General information

Viewed lum

$$= \frac{\text{Luminous intensity [cd]}}{[\text{Distance in metres [m]}]^2}$$

$$= \frac{\text{Luminous flux falling on area [lm]}}{\text{Illuminated area [m}^2\text{]}}$$

$$I = \frac{\text{Luminous flux in solid angle}}{\text{Solid angle } \Omega \text{ [sr]}}$$

# Glossary of the most important lighting terms

As with any technical or scientific discipline, lighting technology has its own special terms and concepts for defining the characteristics of lamps and luminaires and for standardising the units of measurement.

The most important of these are described here.

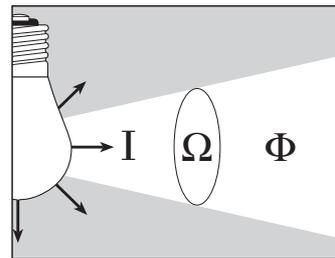
## Luminous flux $\Phi$

Unit of measurement: lumen [lm]

All the radiated power emitted by a light source and perceived by the eye is called luminous flux  $\Phi$ .

## Light and radiation

Light is taken to mean the electromagnetic radiation that the human eye perceives as brightness, in other words that part of the spectrum that can be seen. This is the radiation between 360 and 830 nm, a tiny fraction of the known spectrum of electromagnetic radiation.



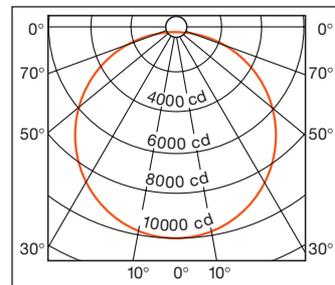
*Luminous intensity  $I$  is a measure of the luminous flux  $\Phi$  emitted in solid angle  $\Omega$ .*

## Luminous intensity $I$

Unit of measurement: candela [cd]

Generally speaking, a light source emits its luminous flux  $\Phi$  in different directions and at different intensities.

The visible radiant intensity in a particular direction is called luminous intensity  $I$ .



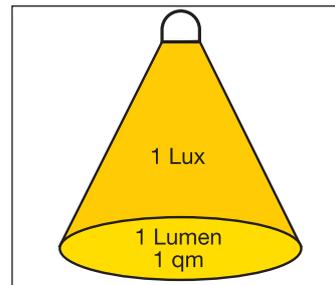
*Polar diagram*

## Illuminance $E$

Unit of measurement: lux [lx]

Illuminance  $E$  is the ratio between the luminous flux and the area to be illuminated.

An illuminance of 1 lx occurs when a luminous flux of 1 lm is evenly distributed over an area of 1 m<sup>2</sup>.

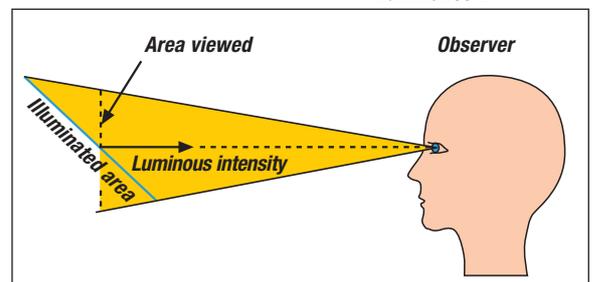


*Illuminance  $E$*

## Luminance $L$

Unit of measurement: candelas per square metre [cd/m<sup>2</sup>]

The luminance  $L$  of a light source or an illuminated area is a measure of how great an impression of brightness is created in the brain.



*Luminance  $L$*

### The most important photometric formulae:

Luminous intensity $I$ [cd]	$\frac{\text{Luminous flux in solid angle}}{\text{Solid angle } \Omega \text{ [sr]}}$
Illuminance $E$ [lx]	$\frac{\text{Luminous flux falling on area [lm]}}{\text{Illuminated area [m}^2\text{]}}$

Illuminance $E$ [lx]	$\frac{\text{Luminous intensity [cd]}}{[\text{Distance in metres [m]}]^2}$
Luminance $L$ [cd/m <sup>2</sup> ]	$\frac{\text{Luminous intensity [cd]}}{\text{Viewed luminous area [m}^2\text{]}}$
Luminous efficacy $\eta$ [lm/W]	$\frac{\text{Generated luminous flux [lm]}}{\text{Electrical power consumed [W]}}$

### Luminous efficacy $\eta$

Unit of measurement: lumens per watt [lm/W]

Luminous efficacy  $\eta$  indicates the efficiency with which the electrical power consumed is converted into light.

### Colour temperature

Unit of measurement: Kelvin [K]

The colour temperature of a light source is defined in comparison with a “black body radiator” and plotted on what is known as the “Planckian curve”. The higher the temperature of this “black body radiator” the greater the blue component in the spectrum and the smaller the red component. An incandescent lamp with a warm white light, for example, has a colour temperature of 2700 K, whereas a daylight fluorescent lamp has a colour temperature of 6000 K.

### Light colour

The light colour of a lamp can be neatly defined in terms of colour temperature. There are three main categories here:

Warm White < 3300 K

Cool White 3300 to 5000 K

Daylight > 5000 K

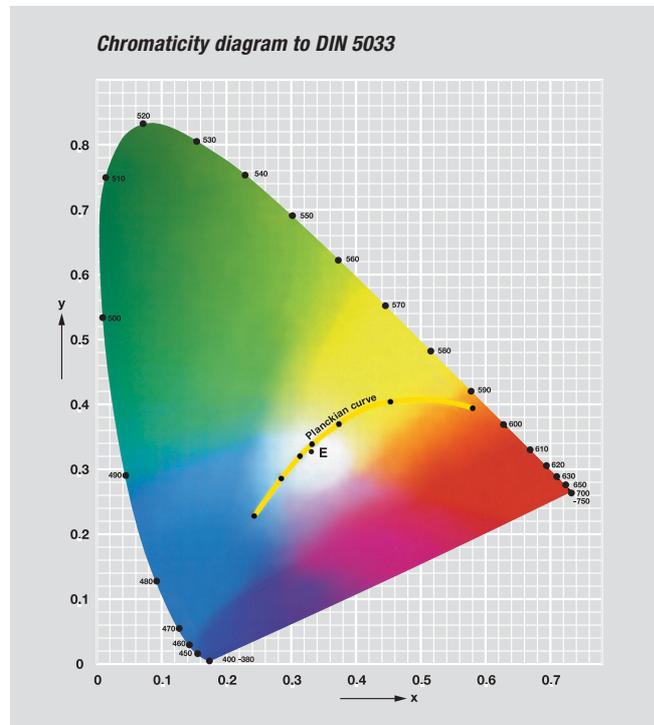
Despite having the same light colour, lamps may have very different colour rendering properties owing to the spectral composition of their light.

### Colour rendering

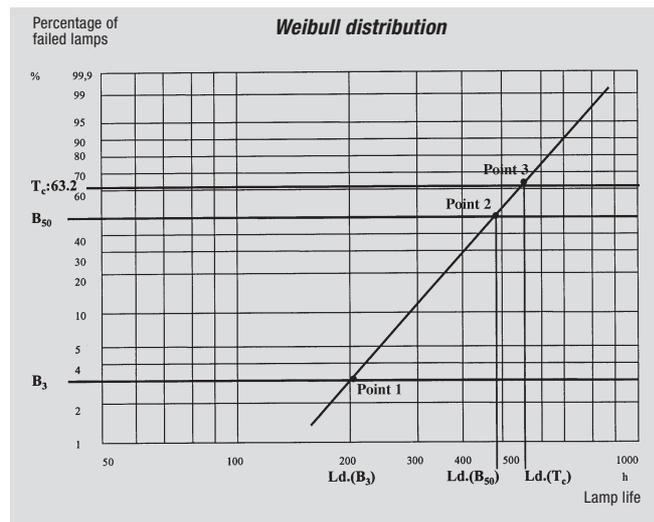
As a rule, artificial light should enable the human eye to perceive colours correctly, as it would in natural daylight. Obviously, this depends to some extent on the location and purpose for which light is required. The criterion here is the colour rendering property of a light source. This is expressed as a “general colour rendering index” ( $R_a$ ). The colour rendering index is a measure of the correspondence between the colour of an object (its “self-luminous colour”) and its appearance under a reference light source. To determine the  $R_a$  values, eight test colours defined in accordance with DIN 6169 are illuminated with the reference light source and the light source under test. The smaller the discrepancy, the better the colour rendering property of the lamp being tested. A light source with an  $R_a$  value of 100 displays all colours exactly as they appear under the reference light source. The lower the  $R_a$  value, the worse the colours are rendered.

### Weibull data for lamp life

Weibull distribution has become established as the standard method for analysing the life of technical products. Endurance tests on products without technical faults produce failure curves which represent the proportion of products that fail in the course of use. Because of their special properties, these curves can be normalised for the purposes of comparison. This involves approximating the distributions to a straight line. To show this, a special coordinate system is needed (named after Dr. E. H. Wallodi Weibull, 1887 to



1979). Service life distribution can now be accurately defined by specifying two points on the straight line, without having to refer to a failure curve. In accordance with IEC 810, the following failure rates have been defined as standard failure rates: The  $B_3$  life value represents the premature failure rate of lamps. It means that 3% of all the tested lamps failed after this number of hours burned. The  $T_C$  life value represents the failure rate of 63.2% of the lamps.  $B_3$  and  $T_C$  are of particular interest in industry. The retail trade makes more use of the  $B_{50}$  value. This indicates the average life of the lamps (50%).



# Type summary by rated voltage

Rated volt- age V	ECE Stan- dard	DIN Stan- dard	Rated wattage	Base	Product reference	See page
*)	•		35	P32d-2	66040 <sup>1)2)14)</sup>	13, 18
*)	•		35	P32d-3	66050 <sup>1)3)14)</sup>	13, 18
*)	•		35	PK32d-2	66042 <sup>1)2)14)</sup>	13, 18
*)	•		35	PK32d-3	66052 <sup>1)3)14)</sup>	13, 18
6			0.6	BA7s	3798 <sup>4)</sup>	23
6	•		0.6	E10	3708	27
6		•	1.2	BA7s	3799 <sup>4)</sup>	23
6		•	2	BA9s	3895	23
6	•		2.4	EP10	3724	27
6	•		2.4	PX13.5s	64100	27
6	•		4	BA9s	3892	23
6	•		5	BA15s	5006	22
6	•		5	SV8.5-8	6416	22
6	•		10	BA15s	5001	22
6		•	10	SV8.5-8	6450	22
6	•		15	P26s	7130	27
6	•		15	PX13.5s	64130	27
6		•	18	BA15s	7526	20
6	•		21	BA15s	7501	20
6	•		25/25	BA20d	7323	26
6	•		35/35	BA20d	7324	26
12			0.4	BX8.5d	2322MFX	24
12			1.1	BX8.4d	2473MFX6	24
12			1.2	B8.3d	2721MF8	24
12			1.2	B8.5d	2721MF <sup>5)</sup>	24
12			1.2	B8.7d	2721MF8W	24
12			1.2	BX8.4d	2351MFX6	24
12			1.2	W2x4.6d	2721	24
12			1.3	BX8.4d	2431MFX6 <sup>6)</sup>	24
12			1.5	B8.5d	2752MF	24
12			1.5	BX8.4d	2452MFX6	24
12			1.5	W2x4.6d	2731	24
12			2	B8.3d	2722MF8	24
12			2	B8.5d	2722MF <sup>5)</sup>	24
12		•	2	BA7s	3898	23
12		•	2	BA9s	3796	23
12		•	2	BX8.4d	2352MFX6	24
12			0.27 A	W2.1x9.2d	194 <sup>7)</sup>	19
12			2	W2x4.6d	2722	24
12		•	2	W2.1x9.5d	2820	24
12	•		2	W2x4.6d	2723	24
12			3	B10d	64122MF <sup>8)</sup>	25
12			3	BA9s	3894	23
12			0.35 A	W2.1x9.2d	168	19
12			3	SV7-8	6428	22
12	•		3	W2.1x9.5d	2821	24
12	•		4	BA9s	3893	23
12	•		4	BA9s	3893D	16
12	•		4	BA9s	3893CB <sup>17)</sup>	21
12			5	B10d	64124MF <sup>8)</sup>	25
12			5	BA9s	3860	23
12			5	BA9s	64111 <sup>9)</sup>	25
12	•		5	BA15d	5407 <sup>10)</sup>	22
12	•		5	BA15s	5007	22
12	•		5	BA15s	5007D	16
12	•		5	BA15s	5007L	17
12			5	SV8.5-8	6413	22
12	•		5	SV8.5-8	6418	22
12	•		5	SV8.5-8	6418D	16
12	•		5	W2.1x9.5d	2825	24
12	•		5	W2.1x9.5d	2825D	16
12	•		5	W2.1x9.5d	2825CB <sup>17)</sup>	21
12	•		5	W2.1x9.5d	2825HCB <sup>17)</sup>	21
12	•		5	W2.1x9.5d	2825L	17
12	•		5	W2.1x9.5d	2826 <sup>11)</sup>	24
12	•		5	W2.1x9.5d	2827 <sup>12)</sup>	20, 24
12			6	BA9s	3886X <sup>13)</sup>	25
12			6	BA9s	6253	23
12	•		6	BAX9s	64132 <sup>1)</sup>	21
12	•		6	BAX9s	64132D	16

Rated volt- age V	ECE Stan- dard	DIN Stan- dard	Rated wattage	Base	Product reference	See page
12	•		6	BAX9s	64132L	17
12	•		6	BAX9s	64132CB <sup>17)</sup>	21
12			6	W2.1x9.5d	2886X <sup>13)</sup>	25
12			6	SV8.5-8	6486X <sup>13)</sup>	22, 25
12			10	BA9s	64113 <sup>9)</sup>	25
12	•		10	BA15s	5008	22
12	•		10	BA15s	5008D	16
12	•		10	BA15s	5008L	17
12		•	10	SV8.5-8	6411	22
12			10	SV8.5-8	6438	22
12			10	SV8.5-8	6461	22
12	•		15	P26s	7135	27
12	•		15	PX13.5s	64131	27
12			15	SV8.5-8	6451	22
12	•		16	W2.1x9.5d	921	20
12		•	18	BA15s	7527	20
12		•	18	SV8.5-8	6475	22
12			18/5	BAY15d	7231	21
12			20	BA9s	64115	25
12	•		21	BA15s	7506	20
12	•		21	BA15s	7506L	17
12	•		21	BAU15s	7507	20
12	•		21	BAU15s	7507LDA	17, 20
12	•		21	BAY9s	64136 <sup>1)</sup>	21
12	•		21	SV8.5-8	6476	22
12	•		21	W3x16d	7505	20
12	•		21/4	BAZ15d	7225	21
12	•		21/5	BAY15d	7528D	16
12	•		21/5	BAY15D	7528L	17
12	•		21/5	BAY15d	7528	21
12	•		21/5	W3x16q	7515	21
12	•		25/25	BA20d	7326	26
12	•		27	W2.5x16d	3156	20
12	•		27/7	W2.5x16q	3157	21
12	•		27/7	WX2.5x16q	3757AK <sup>7)</sup>	20
12	•		35	PGJ19-1	64212 <sup>14)</sup>	12, 26
12	•		35/35	BA20d	7327	26
12	•		35/35	PX43t	64185	26
12			42 <sup>23)</sup>		XENAELECTRON 35W XT-D1/12V	14
12			42 <sup>23)</sup>		XENAELECTRON 35W XT-D1/12V TAB	14
12	•		42	PY20d	9145	12, 18
12	•		45/40	P45t	7951 <sup>4)</sup>	10
12	•		45/40	P45t	64183 <sup>1)15)</sup>	10, 26
12	•		51	P22d	9006 <sup>14)</sup>	12, 18
12	•		51	P22d	9006CB <sup>14)17)22)</sup>	12, 18
12	•		51	P22d	9006XS <sup>14)</sup>	12, 18
12	•		53	PZ20d	9055	12, 18
12	•		55	PGJ19-2	64211 <sup>14)</sup>	12, 18, 26
12	•		55	PGJ19-2	64211SUP <sup>14)18)</sup>	12, 26
12	•		55	P14.5s	64150 <sup>14)</sup>	11, 18, 26
12	•		55	P14.5s	64150D <sup>14)</sup>	16
12	•		55	P14.5s	64150L <sup>14)</sup>	17
12	•		55	P14.5s	64150S <sup>4)19)</sup>	11
12	•		55	P14.5s	64150CB <sup>14)17)</sup>	11
12	•		55	P14.5s	64150ALS <sup>7)14)20)</sup>	11
12	•		55	P14.5s	64150SUP <sup>14)20)</sup>	11
12	•		55	P14.5s	64150SVS <sup>14)21)</sup>	11
12	•		55	PK22s	64151 <sup>14)</sup>	11, 18, 26
12	•		55	PK22s	64151L <sup>14)</sup>	17
12	•		55	PK22s	64151S <sup>14)</sup>	11
12	•		55	PK22s	64151CB <sup>14)</sup>	11
12	•		55	PK22s	64151ALS <sup>7)14)20)</sup>	11
12	•		55	PK22s	64151SUP <sup>14)20)</sup>	11
12	•		55	PX26d	64210ALL <sup>7)14)</sup>	11
12	•		55	PX26d	64210 <sup>14)</sup>	11, 18, 26
12	•		55	PX26d	64210D <sup>14)</sup>	16
12	•		55	PX26d	64210L <sup>14)</sup>	17
12	•		55	PX26d	64210CB <sup>14)17)22)</sup>	11

## Type summary by rated voltage

Rated volt- age V	ECE Stan- dard	DIN Stan- dard	Rated wattage	Base	Product reference	See page	Rated volt- age V	ECE Stan- dard	DIN Stan- dard	Rated wattage	Base	Product reference	See page
12	•		55	PX26d	64210SVS <sup>14)21)22)</sup>	11	24	•		4	BA9s	3930	23
12	•		55	X511	64173	11	24	•		4	BA9s	9930	16
12	•		60	P20d	9005 <sup>14)</sup>	12, 18	24	•		5	BA15d	5626 <sup>10)</sup>	22
12	•		60	P20d	9005CB <sup>14)17)</sup>	12, 18	24	•		5	BA15s	5627	22
12	•		60	P20d	9005XS <sup>7)14)</sup>	12, 18	24	•		5	BA15s	9627	16
12	•		60/55	P43t	9003CB <sup>14)17)22)</sup>	10, 18	24	•		5	SV8.5-8	6423	22
12	•		60/55	P43t	9003L <sup>14)</sup>	10, 17, 18	24	•		5	SV8.5-8	6424	22
12	•		60/55	P43t	9003XV <sup>14)20)</sup>	10, 18	24	•		5	W2.1x9.5d	2845	24
12	•		60/55	P43t	64193	10, 26	24	•		10	BA15s	5637	22
12	•		60/55	P43t	64193D	16	24	•		10	BA15s	9637	16
12	•		60/55	P43t	64193L	17	24	•		10	SV8.5-8	6429	22
12	•		60/55	P43t	64193ALS <sup>7)20)</sup>	10	24	•		15	BA15s	7529	20
12	•		60/55	P43t	64193SUP	10	24	•		15	SV8.5-8	6453	22
12	•		60/55	P43t	64193SVS <sup>21)22)</sup>	10	24	•	•	18	BA15 s	7535	20
12	•		60/55	P43t	94193	16, 26	24	•	•	18	SV8.5-8	6480	22
12	•		60/55	P43t	64193CB <sup>17)22)</sup>	10	24	•		18/5	BAY15d	7244	21
12	•		65	PGJ19-5	64213 <sup>14)</sup>	12, 18, 26	24	•		21	BA15s	7511	20
12			65	PX26d	64217	28	24	•		21	BA15s	9511	16
12			65/45	P29t	9004	18	24	•		21	BAU15s	9507 <sup>12)</sup>	16, 20
12			65/55	PX29t	9007	18	24	•		21	BAY9s	64138 <sup>1)</sup>	21
12			100	P14.5s	62200	28	24	•		21/5	BAY15d	7537	21
12			100	PK22s	62201	28	24	•		55/50	P45t	7952 <sup>4)</sup>	10
12			100	PKY22s	64153	17, 28	24	•		70	P14.5s	64155	11
12			100	PX14.5s	64152	17, 28	24	•		70	PGJ19-2	64216	12
12			100/80	P43t	62203	28	24	•		70	PK22s	64156	11
12			100/80	PU43t	64194	17, 28	24	•		70	PX26d	64215	11
12			110	PKY22s	62205	28	24	•		70	X511	64175	11
12.8		1.8 A		BA15s	1073 <sup>7)</sup>	19	24	•		75/70	P43t	64196	10
12.8		2.1 A		BA15s	1156	19	24	•		75/70	P43t	94196	16
12.8 – 14		2.1/0.59A		BAY15d	1157	19					Cable	Input Connector	15
13.5		0.59 A		BA15s	67	19					Cable	32340	15
13.5		0.69 A		BA15s	97	19					Cable	32342	15
24		1.2		B8.3d	2741MF8	24					Cable	32344	15
24		1.2		B8.5d	2741MF <sup>5)</sup>	24					Cable	32346	15
24		1.2		W2x4.6d	2741	24					Cable	32350	15
24	•	2		BA9s	3797	23					Cable	32356	15
24	•	2		W2.1x9.5d	2840	24					Cable	32358	15
24	•	3		BA7s	3899	23					Cable	32360	15
24		3		SV7-8	6430	22					Cable	32362	15
24	•	3		W2.1x9.5d	2841	24							

\*) Only in conjunction with electronic control gear

1) Reduced UV emission

2) For projection headlights

3) With anti-dazzle strip for reflection headlights

4) Discontinued

5) Also available as MFX version for 1.5 mm printed circuit boards

6) LCL = 9.2 mm

7) On request

8) With plastic lampholder MF for printed circuit boards 2 mm thick; also available as MFX version for 1.5 mm printed circuit boards

9) Also available with glass base.

Product reference 6411150 or 6411350

10) Only for special vehicles for which double-pole insulated cable is prescribed

11) Heat-resistant

12) Amber lamp for clear indicators

13) Filled with xenon for high luminance

14) Lamps comply with ECE R 37 and SAE (DOT) regulations

15) Successor to BILLUX® AS® R2 (7951)

16) SAE and ECE approved

17) COOL BLUE® version

18) H11 with increased luminance

19) Strict geometrical tolerances

20) SUPER version with up to 30% higher luminance

21) SILVERSTAR® version for more light on the road (up to 50%)

22) With silver cap

23) For operating an OSRAM D1 XENARC® electronic 35 W gas discharge lamp

# Type summary

## in numerical order of reference numbers with test data

Product reference	ECE Standard	DIN Standard	ECE/SAE category	Rated voltage V	Rated wattage W	Base	See page	Test voltage V	Power draw W	Luminous flux lm	B <sub>3</sub> /T <sub>c</sub>
67			G6	13.5	0.59 A	BA15s	19	13.5	0.59 A	4 mscp	1500/10000
97			G6	13.5	0.69 A	BA15s	19	13.5	0.69 A	4 mscp	5000 <sup>3)</sup>
168			T31/4	12	0.35 A	W2.1x9.2d	19	14.0	0.35 A	3 mscp	1500 <sup>3)</sup>
194 <sup>10)</sup>			T31/4	12	0.27 A	W2.1x9.2d	19	14.0	0.27 A	2 mscp	2500 <sup>3)</sup>
921	•		W16W	12	16	W2.1x9.5d	20	13.5	19.4 ± 10%	310 ± 20	1000 <sup>3)</sup>
1073 <sup>10)</sup>			S8	12.8	1.8 A	BA15s	19	12.8	1.8 A	32 mscp	200 <sup>3)</sup>
1156			S8	12.8	2.1 A	BA15s	19	12.8	2.1 A	32 mscp	700/1500
1157			S8	12.8–14	2.1/0.59 A	BAY15d	19	12.8/14.0	2.1 A	32/3 mscp	400/1200 /3000/6000
2322MFX				12	0.4	BX8.5d	24	12.0	0.36 ± 10%	min. 0.6	15V 1000 <sup>3)</sup>
2351MFX6				12	1.2	BX8.4d	24	13.5	1.32 ± 10%	7.5 ± 20	600/3000
2352MFX6				12	2	BX8.4d	24	13.5	2.13 ± 10%	11.8 ± 20	1500/6000
2431MFX6 <sup>26)</sup>				12	1.3	BX8.4d	24	13.5	1.28 ± 15%	6.5 ± 20	1300/6000
2452MFX6				12	1.5	BX8.4d	24	13.5	1.8 ± 10%	6.5 ± 20	1700/6500
2473MFX6				12	1.1	BX8.4d	24	14.0	1.12 ± 10%	3.6 ± 25	500/5000
2721MF <sup>19)</sup>				12	1.2	B8.5d	24	13.5	1.2 ± 10%	6.4 ± 25%	500/2000
2721MF8				12	1.2	B8.3d	24	13.5	1.22 ± 10%	6.4 ± 25%	500/2000
2721MF8W				12	1.2	B8.7d	24	13.5	1.22 ± 10%	6.4 ± 25%	500/2000
2721				12	1.2	W2x4.6d	24	13.5	1.22 ± 10%	7.5 ± 20	500/2000
2722MF <sup>19)</sup>				12	2	B8.5d	24	13.5	2 ± 10%	10.2 ± 25%	1300/4000
2722MF8				12	2	B8.3d	24	13.5	2 ± 10%	10.2 ± 25%	1300/4000
2722				12	2	W2x4.6d	24	13.5	2 ± 10%	12 ± 25%	1300/4000
2723	•		W2.3W	12	2.3	W2x4.6d	24	13.5	2.3 ± 10%	18.6 ± 20%	350/1200
2731				12	1.5	W2x4.6d	24	13.5	1.28 ± 15%	7.0 ± 15%	1300/6000
2741MF <sup>19)</sup>				24	1.2	B8.5d	24	28.0	1.6 ± 10%	6.4 ± 25%	400/2000
2741MF8				24	1.2	B8.3d	24	28.0	1.6 ± 10%	6.4 ± 25%	400/2000
2741				24	1.2	W2x4.6d	24	28.0	1.5 ± 10%	7.5 ± 25%	400/2000
2752MF				12	1.5	B8.5d	24	13.5	1.8 ± 10%	6.0 ± 20%	1000/6500
2820		•		12	2	W2.1x9.5d	24	13.5	2.2 ± 10%	13.5 ± 25%	600/4000
2821	•		W3W	12	3	W2.1x9.5d	24	13.5	3 ± 10%	22 ± 30%	1300/4000
2825	•		W5W	12	5	W2.1x9.5d	24	13.5	5 ± 10%	50 ± 20%	350/1000
2825CB	•		W5W	12	5	W2.1x9.5d	21	13.5	5 ± 10%	50 ± 20%	200/500
2825D	•		W5W	12	5	W2.1x9.5d	16	13.5	5 ± 10%	50 ± 20%	700/1500
2825HCB	•		W5W	12	5	W2.1x9.5d	21	13.5	5 ± 20%	50 ± 20%	800/2000
2825L	•		W5W	12	5	W2.1x9.5d	17	13.5	5 ± 10%	50 ± 20%	700/1500
2826 <sup>6)</sup>	•		W5W	12	5	W2.1x9.5d	24	13.5	5 ± 10%	50 ± 20%	350/1000
2827 <sup>7)</sup>	•		WY5W	12	5	W2.1x9.5d	20, 24	13.5	5 ± 10%	30 ± 20%	350/1000
2840		•		24	2	W2.1x9.5d	24	28.0	2.6 ± 15%	13 ± 30%	500/5000
2841	•		W3W	24	3	W2.1x9.5d	24	28.0	4 ± 15%	22 ± 30%	500/5000
2845	•		W5W	24	5	W2.1x9.5d	24	28.0	7 ± 10%	50 ± 20%	800/3000
2886X <sup>9)</sup>				12	6	W2.1x9.5d	25	13.5	6 ± 10%	85 ± 20%	400/1000
3156	•		P27W	12	27	W2.5x16d	20	13.5	29.2 ± 10%	475 ± 15%	600 <sup>3)</sup>
3157	•		P27/7W	12	27/7	W2.5x16q	21	13.5	29.2/7.7 ± 10%	475/36 ± 15%	600/5000 <sup>3)</sup>
3708		•	C0.6W <sup>24)</sup>	6	0.6	E10	27	6.0	0.6 ± 10%	3 ± 35%	100 <sup>3)</sup>
3724		•	C2.4W <sup>24)</sup>	6	2.4	EP10	27	6.0	2.4 ± 10%	24 ± 20%	570/8300
3757AK <sup>10)</sup>	•		PY27/7W	12	27/7	WX2.5x16q	20	13.5	29.2/7.7 ± 10%	280/21 ± 15%	600/5000 <sup>3)</sup>
3796		•		12	2	BA9s	23	13.5	2 ± 15%	12.5 ± 30%	1000/2000
3797		•		24	2	BA9s	23	28.0	3 ± 15%	17.5 ± 30%	1000/2000
3798 <sup>15)</sup>				6	0.6	BA7s	23	6.75	± 15%	min. 2.5	200 <sup>3)</sup>
3799 <sup>15)</sup>		•		6	1.2	BA7s	23	6.75	1.2 ± 15%	min. 7	200 <sup>3)</sup>
3860				12	5	BA9s	23	13.5	5 ± 15%	50 ± 20%	400/1000
3886X <sup>9)</sup>				12	6	BA9s	25	13.5	6 ± 10%	80 ± 20%	400/1000
3892	•		T4W	6	4	BA9s	23	6.75	4 ± 10%	35 ± 20%	300/1000
3893	•		T4W	12	4	BA9s	23	13.5	4 ± 10%	35 ± 20%	600/1200
3893CB	•		T4W	12	4	BA9s	21	13.5	4 ± 10%	35 ± 20%	300/750
3893D	•		T4W	12	4	BA9s	16	13.5	4 ± 10%	35 ± 20%	750/1500
3894				12	3	BA9s	23	13.5	3 ± 10%	22 ± 20%	1000/2000
3895		•		6	2	BA9s	23	6.75	2 ± 15%	12.5 ± 30%	200 <sup>3)</sup>
3898		•		12	2	BA7s	23	13.5	2 ± 15%	min. 7.5	200 <sup>3)</sup>
3899		•		24	3	BA7s	23	28.0	3 ± 15%	min. 7.5	200 <sup>3)</sup>
3930	•		T4W	24	4	BA9s	23	28.0	5 ± 10%	35 ± 20%	550/1000
5001	•		R10W	6	10	BA15s	22	6.75	10 ± 10%	125 ± 20%	100/300
5006	•		R5W	6	5	BA15s	22	6.75	5 ± 10%	50 ± 20%	250/500
5007	•		R5W	12	5	BA15s	22	13.5	5 ± 10%	50 ± 20%	350/800
5007D	•		R5W	12	5	BA15s	16	13.5	5 ± 10%	50 ± 20%	600/1200
5007L	•		R5W	12	5	BA15s	17	13.5	5 ± 10%	50 ± 20%	600/1200
5008	•		R10W	12	10	BA15s	22	13.5	10 ± 10%	125 ± 20%	350/800
5008D	•		R10W	12	10	BA15s	16	13.5	10 ± 10%	125 ± 20%	600/1200
5008L	•		R10W	12	10	BA15s	17	13.5	10 ± 10%	125 ± 20%	600/1200
5407 <sup>9)</sup>	•		R5W	12	5	BA15d	22	13.5	5 ± 10%	50 ± 20%	200 <sup>3)</sup>

# Type summary

## in numerical order of reference numbers with test data

Product reference	ECE Standard	DIN Standard	ECE/SAE category	Rated voltage V	Rated wattage W	Base	See page	Test voltage V	Power draw W	Luminous flux lm	B <sub>3</sub> /T <sub>c</sub>
5626 <sup>5)</sup>	•		R5W	24	5	BA15d	22	28.0	7 ± 10%	50 ± 20%	200 <sup>3)</sup>
5627	•		R5W	24	5	BA15s	22	28.0	7 ± 10%	50 ± 20%	500/1000
5637	•		R10W	24	10	BA15s	22	28.0	12.5 ± 10%	125 ± 20%	400/800
6253				12	6	BA9s	23	13.5	6 ± 10%	53 ± 25%	200 <sup>3)</sup>
6411		•		12	10	SV8.5-8	22	13.5	10 ± 10%	min. 100	500/1000
6413				12	5	SV8.5-8	22	13.5	5 ± 10%	50 ± 20%	1000/2000
6416	•		C5W	6	5	SV8.5-8	22	6.75	5 ± 10%	45 ± 20%	500/1000
6418	•		C5W	12	5	SV8.5-8	22	13.5	5 ± 10%	45 ± 20%	1000/2000
6418D	•		C5W	12	5	SV8.5-8	16	13.5	5 ± 10%	45 ± 20%	1500/4000
6423	•		C5W	24	5	SV8.5-8	22	28.0	7 ± 10%	45 ± 20%	1500/4000
6424				24	5	SV8.5-8	22	28.0	7 ± 10%	62 ± 20%	1000/2000
6428				12	3	SV7-8	22	13.5	3.5 ± 10%	29 ± 20%	600/1200
6429				24	10	SV8.5-8	22	28.0	10 ± 10%	105 ± 20%	300/600
6430				24	3	SV7-8	22	28.0	3 ± 10%	min. 15	400/800
6438				12	10	SV8.5-8	22	13.5	10 ± 10%	120 ± 25%	500/1000
6450		•		6	10	SV8.5-8	22	6.75	10 ± 10%	min. 100	200 <sup>3)</sup>
6451				12	15	SV8.5-8	22	13.5	15 ± 10%	220 ± 20%	100/200
6453				24	15	SV8.5-8	22	28.0	15 ± 8%	220 ± 20%	75/200
6461				12	10	SV8.5-8	22	13.5	10 ± 10%	105 ± 20%	600/1200
6475		•		12	18	SV8.5-8	22	13.5	18 ± 5%	min. 240	75/200
6476	•		C21W	12	21	SV8.5-8	22	13.5	25 ± 6%	460 ± 15%	100/300
6480		•		24	18	SV8.5-8	22	28.0	20 ± 5%	min. 240	100/300
6486X <sup>®)</sup>				12	6	SV8.5-8	22, 25	13.5	6 ± 10%	85 ± 20%	350/600
7130	•		S3	6	15	P26s	27	6.75	15 ± 6%	240 ± 15%	80/150
7135	•		S3	12	15	P26s	27	13.5	15 ± 6%	240 ± 15%	80/150
7225	•		P21/4W	12	21/4	BAZ15d	21	13.5	25 ± 6%	440 ± 15%	180/290
									/5 ± 10%	15 ± 20%	/1250//4000
7231				12	18/5	BAY15d	21	13.5	18 ± 6%	min. 250/35	100//200
									5 ± 10%		/100//500
7244				24	18/5	BAY15d	21	28.0	18 ± 6%	min. 250/35	75/200 <sup>3)</sup>
									5 ± 10%		
7323	•		S1	6	25/25	BA20d	26	6.75	25/25 ± 5%	435/315 ± 20%	100/100 <sup>3)</sup>
7324	•		S2	6	35/35	BA20d	26	6.3	35/35 ± 10%	min. 520/375...560	100/100 <sup>3)</sup>
7326	•		S1	12	25/25	BA20d	26	13.5	25/25 ± 5%	435/315 ± 20%	100/100 <sup>3)</sup>
7327	•		S2	12	35/35	BA20d	26	13.5	35/35 ± 10%	650/465 ± 20%	80/160 <sup>3)</sup>
7501	•		P21W	6	21	BA15s	20	6.75	26 ± 6%	460 ± 15%	150/400
7505	•		W21W	12	21	W3x16d	20	13.5	25 ± 6%	460 ± 15%	400/600 (14.0V)
7506	•		P21W	12	21	BA15s	20	13.5	25 ± 6%	460 ± 15%	224/480
7506L	•		P21W	12	21	BA15s	17	13.5	25 ± 6%	460 ± 15%	500/1000
7507	•		PY21W	12	21	BAU15s	20	13.5	25 ± 6%	280 ± 20%	250/400
7507LDA	•		PY21W	12	21	BAU15s	17, 20	13.5	25 ± 6%	280 ± 20%	500/1000
7511	•		P21W	24	21	BA15s	20	28.0	28 ± 5%	460 ± 15%	200/400
7515	•		W21/5W	12	21/5	W3x16q	21	13.5	25 ± 6%	440 ± 15%	400/600 (14.0V)
									6 ± 10%	35 ± 20%	/>3000//>3000 (14.0V)
7526		•		6	18	BA15s	20	6.75	18 ± 6%	250 ... 375	50/150
7527		•		12	18	BA15s	20	13.5	18 ± 6%	min. 250	40/200
7528	•		P21/5W	12	21/5	BAY15d	21	13.5	25 ± 6%	440 ± 15%/	180//290
									6 ± 10%	35 ± 20%	/1250//4000
7528D	•		P21/5W	12	21/5	BAY15d	16	13.5	25 ± 6%	440 ± 15%/	300//800
										35 ± 20%	/3000//6000
7528L	•		P21/5W	12	21/5	BAY15d	17	13.5	25 ± 6%	440 ± 15%/	300//800
									/6 ± 10%	35 ± 20%	/3000//6000
7529				24	15	BA15s	20	28.0	15 ± 10%	210 ± 25%	100/300
7535		•		24	18	BA15s	20	28.0	20 ± 6%	min. 250	100/200
7537	•		P21/5W	24	21/5	BAY15d	21	28.0	28 ± 6%	440 ± 15%	150/1500
									10 ± 10%	40 ± 20%	
7951	•		R2	12	45/40	P45t	10	13.2	max. 57/51	min. 860/	80//150
										675 ± 15%	/150//350
7952	•		R2	24	55/50	P45t	10	28.0	max. 76/69	min. 1000/730...	65//110
										...990	/150//250
9003CB <sup>13/17)</sup>	•		H4/HB2 <sup>25)</sup>	12	60/55	P43t	10, 18	13.2	max. 75/68	1650/1000 ± 15%	50//100
											/150//300
9003L <sup>13)</sup>	•		H4/HB2 <sup>25)</sup>	12	60/55	P43t	10, 17, 18	13.2	max. 75/68	1650/1000 ± 15%	300//1100
											/500//2400
9003XV <sup>13/20)</sup>	•		H4/HB2 <sup>25)</sup>	12	60/55	P43t	10, 18	13.2	max. 75/68	1700/1075 ± 7%	150//150
											/350//350
9004			HB1	12	65/45	P29t	18	12.8	max. 70/50	1200/700 ± 10%	150/320 (14.0V) <sup>3)</sup>
9005 <sup>13)</sup>	•		HB3	12	60	P20d	12, 18	13.2	max. 73	1860 ± 12%	280/550
9005CB <sup>13/17)</sup>	•		HB3	12	60	P20d	12, 18	13.2	max. 73	1860 ± 12%	70/135

# Type summary

## in numerical order of reference numbers with test data

Product reference	ECE Standard	DIN Standard	ECE/SAE category	Rated voltage V	Rated wattage W	Base	See page	Test voltage V	Power draw W	Luminous flux lm	B <sub>3</sub> /T <sub>C</sub>
9005XS <sup>(10)13</sup>	•		HB3A	12	60	P20d	12, 18	13.2	max. 73	1860 ± 12%	280/550
9006 <sup>(13)</sup>	•		HB4	12	51	P22d	12, 18	13.2	max. 62	1095 ± 15%	860/1720
9006CB <sup>(13)17</sup>	•		HB4	12	51	P22d	12, 18	13.2	max. 62	1095 ± 15%	200/410
9006XS <sup>(13)</sup>	•		HB4A	12	51	P22d	12, 18	13.2	max. 62	1095 ± 15%	860/1720
9007			HB5	12	65/55	PX29t	18	12.8	max. 70/60	1350/1000 ± 10%	250/500 (14.0V) <sup>3)</sup>
9055	•		H12	12	53	PZ20d	12, 18	13.2	max. 61	1050 ± 15%	770/1550
9145	•		H10	12	42	PY20d	12, 18	13.2	max. 50	850 ± 15%	860/1720
9507 <sup>(7)</sup>	•		PY21W	24	21	BAU15s	16, 20	28.0	28 ± 6%	280 ± 20%	250/500
9511	•		P21W	24	21	BA15s	16	28.0	28 ± 6%	460 ± 15%	250/500
9627	•		R5W	24	5	BA15s	16	28.0	7 ± 10%	50 ± 20%	500/1000
9637	•		R10W	24	10	BA15s	16	28.0	12.5 ± 10%	125 ± 20%	1000/2000
9930	•		T4W	24	4	BA9s	16	28.0	5 ± 10%	35 ± 20%	550/1000
32340						Cable	15				
32342						Cable	15				
32344						Cable	15				
32346						Cable	15				
32350						Cable	15				
32356						Cable	15				
32358						Cable	15				
32360						Cable	15				
32362						Cable	15				
62200				12	100	P14.5s	28				
62201				12	100	PK22s	28				
62203				12	100/80	P43t	28				
62205				12	110	PKY22s	28				
64100	•		HS3	6	2.4	PX13.5s	27	6.0	2.4 ± 7.5%	36 ± 15%	50/100
64111 <sup>(4)</sup>				12	5	BA9s	25	13.5	5 ± 7.5%	80 ± 15%	150/500
64113 <sup>(4)</sup>				12	10	BA9s	25	13.5	10.3 ± 7.5%	200 ± 15%	150/400
64115				12	20	BA9s	25	13.5	22.5 ± 7.5%	450 ± 15%	150/500
64122MF <sup>(9)</sup>				12	3	B10d	25	13.5	3 ± 7.5%	29 ± 15%	900/2000
64124MF <sup>(9)</sup>				12	5	B10d	25	13.5	5 ± 7.5%	52.8 ± 15%	900/2000
64130	•		HS2	6	15	PX13.5s	27	6.75	15 ± 6%	320 ± 15%	150/400
64131	•		HS2	12	15	PX13.5s	27	13.5	15 ± 6%	320 ± 15%	100/250
64132 <sup>(1)</sup>	•		H6W	12	6	BAX9s	21	13.5	7 ± 5%	125 ± 12%	350/700
64132CB	•		H6W	12	6	BAX9s	21	13.5	7 ± 5%	125 ± 12%	200/400
64132D	•		H6W	12	6	BAX9s	16	13.5	7 ± 5%	125 ± 12%	600/1000
64132L	•		H6W	12	6	BAX9s	17	13.5	7 ± 5%	125 ± 12%	600/1000
64136 <sup>(1)</sup>	•		H21W	12	21	BAY9s	21	13.5	25 ± 5%	600 ± 12%	300/600
64138 <sup>(1)</sup>	•		H21W	24	21	BAY9s	21	28.0	28 ± 5%	600 ± 12%	150/400
64150 <sup>(13)</sup>	•		H1	12	55	P14.5s	11, 18, 26	13.2	max. 68	1550 ± 15%	400/650
64150ALS <sup>(10)13)20)</sup>	•		H1	12	55	P14.5s	11	13.2	max. 68	1700 ± 4.5%	150/350
64150CB <sup>(13)</sup>	•		H1	12	55	P14.5s	11	13.2	max. 68	1550 ± 15%	150/250
64150D	•		H1	12	55	P14.5s	16	13.2	max. 68	1550 ± 15%	1200/2000
64150L <sup>(13)</sup>	•		H1	12	55	P14.5s	17	13.2	max. 68	1475 ± 10%	600/1200
64150S <sup>(2)13)</sup>	•		H1	12	55	P14.5s	11	13.2	max. 68	1550 ± 10%	600/1200
64150SUP <sup>(13)20)</sup>	•		H1	12	55	P14.5s	11	13.2	max. 68	1700 ± 4.5%	150/350
64150SVS <sup>(13)21)</sup>	•		H1	12	55	P14.5s	11	13.2	max. 68	1730 ± 3%	150/350
64151 <sup>(13)</sup>	•		H3	12	55	PK22s	11, 18, 26	13.2	max. 68	1450 ± 15%	400/650
64151L <sup>(13)</sup>	•		H3	12	55	PK22s	17	13.2	max. 68	1400 ± 10%	600/1200
64151ALS <sup>(10)13)20)</sup>	•		H3	12	55	PK22s	11	13.2	max. 68	1600 ± 3%	150/350
64151SUP <sup>(13)20)</sup>	•		H3	12	55	PK22s	11	13.2	max. 68	1600 ± 3%	150/350
64151CB <sup>(13)</sup>	•		H3	12	55	PK22s	11	13.2	max. 68	1450 ± 15%	150/250
64151S <sup>(13)</sup>	•		H3	12	55	PK22s	11	13.2	max. 68	1450 ± 15%	400/650
64152				12	100	PX14.5s	17, 28	13.2	93 ± 5	2600 ± 10%	50 <sup>3)</sup>
64153				12	100	PKY22s	17, 28	13.2	85 ± 5	2300 ± 10%	50 <sup>3)</sup>
64155	•		H1	24	70	P14.5s	11	28.0	max. 84	1900 ± 15%	400/650
64156	•		H3	24	70	PK22s	11	28.0	max. 84	1750 ± 15%	400/650
64173	•		H2	12	55	X511	11	13.2	max. 68	1800 ± 15%	90/250
64175	•		H2	24	70	X511	11	28.0	max. 84	2150 ± 15%	90/250
64183 <sup>(1)11)</sup>	•		R2	12	45/40	P45t	10, 26	13.2	48.5/46.5 ± 6%	1030/740 + 12%/ + 5% - 15%	250/400 /500//1200
64185	•		HS1	12	35/35	PX43t	26	13.2	max. 36.8 /36.8	825/525 ± 15%	150//150 /300//300
64193	•		H4	12	60/55	P43t	10, 26	13.2	max. 75/68	1650/1000 ± 12%/ ± 15%	250//400 /500//900
64193ALS <sup>(10)20)</sup>	•		H4	12	60/55	P43t	10	13.2	max. 75/68	1700/1075 ± 10%/ ± 7%	150//150 /350//350
64193D	•		H4	12	60/55	P43t	16	13.2	max. 75/68	1650/1000 ± 12%/ ± 15%	250//1200 /500//3000

# Type summary

## in numerical order of reference numbers with test data

Product reference	ECE Standard	DIN Standard	ECE/SAE category	Rated voltage V	Rated wattage W	Base	See page	Test voltage V	Power draw W	Luminous flux lm	B <sub>3</sub> /T <sub>C</sub>
64193L	•		H4	12	60/55	P43t	17	13.2	max. 75/68	1650/1000 ± 12%/ ± 15%	300//1100 /500//2400
64193SUP <sup>20)</sup>	•		H4	12	60/55	P43t	10	13.2	max. 75/68	1700/1075 ± 10%/ ± 7%	150//150 /350//350
64193SVS <sup>21)22)</sup>	•		H4	12	60/55	P43t	10	13.2	max. 75/68	1700/1075 ± 10%/ ± 7%	150//150 /350//350
64193CB	•		H4	12	60/55	P43t	10	13.2	max. 75/68	1650/1000 ± 15%	50//100 /150//350
64194				12	100/80	PU43t	17, 28	13.2	max. 109/85	2900/1500 ± 15%	75/150
64196	•		H4	24	75/70	P43t	10	28.0	max. 85/80	1900/1200 ± 15%	170//350 /400//800
64210 <sup>13)</sup>	•		H7	12	55	PX26d	11, 18, 26	13.2	max. 58	1500 ± 10%	330/550
64210L <sup>13)</sup>	•		H7	12	55	PX26d	17	13.2	max. 58	1500 ± 10%	450/930
64210ALL <sup>10)13)</sup>	•		H7	12	55	PX26d	11	13.2	max. 58	1500 ± 10%	330/550
64210CB <sup>13)</sup>	•		H7	12	55	PX26d	11	13.2	max. 58	1500 ± 10%	100/200
64210D	•		H7	12	55	PX26d	16	13.2	max. 58	1500 ± 10%	450/930
64210SVS <sup>13)21)22)</sup>	•		H7	12	55	PX26d	11	13.2	max. 58	1500 ± 10%	150/220
64211 <sup>13)</sup>	•		H11	12	55	PGJ19-2	12, 18, 26	13.2	max. 62	1350 ± 10%	1000/2000
64211SUP <sup>13)18)</sup>	•		H11	12	55	PGJ19-2	12, 26	13.2	max. 62	1350 ± 10%	450/930
64212 <sup>13)</sup>	•		H8	12	35	PGJ19-1	12, 18, 26	13.2	max. 43	800 ± 15%	400/800
64213 <sup>13)</sup>	•		H9	12	65	PGJ19-5	12, 18, 26	13.2	max. 73	2100 ± 10%	250/500
64215	•		H7	24	70	PX26d	11	28.0	max. 75	1750 ± 10%	220/500
64216	•		H11	24	70	PGJ19-2	12				
64217				12	65	PX26d	28				
66040 <sup>1)14)16)</sup>	•		D2S	γ	35	P32d-2	13, 18	85	35 ± 3%	3200 ± 15%	1500/3000
66042 <sup>1)14)16)</sup>	•		D1S	γ	35	PK32d-2	13, 18	85	35 ± 3%	3200 ± 15%	1500/3000
66050 <sup>1)2)16)</sup>	•		D2R	γ	35	P32d-3	13, 18	85	35 ± 3%	2800 ± 16%	1500/3000
66052 <sup>1)2)16)</sup>	•		D1R	γ	35	PK32d-3	13, 18	85	35 ± 3%	2800 ± 16%	1500/3000
94193	•		H4	12	60/55	P43t	16, 26	13.2	max. 75/68	1650 ± 12% 1000 ± 15%	300//1100 /500//2400
94196	•		H4	24	75/70	P43t	16	28.0	max. 85/80	1900 ± 15% 1200 ± 10%	170//500 /400//1500
<b>Input Connector</b>						<b>Cable</b>					
XENAELECTRON				12	42 <sup>23)</sup>			14			
35W XT-D1/12V											
XENAELECTRON				12	42 <sup>23)</sup>			14			
35W XT-D1/12V TAB											

Key: 1-filament lamp e.g. 100/300  
2-filament lamp e.g. 100//300/500//100  
B<sub>3</sub> T<sub>C</sub>

- \*) Only in conjunction with electronic control gear  
1) Reduced UV emission  
2) With anti-dazzle strip for reflection headlights  
3) B<sub>50</sub> = average life  
Key: 1-filament lamp e.g. 100  
2-filament lamp e.g. 100/300  
4) Also available with glass base.  
Product reference 641150 or 6411350

- 5) Only for special vehicles for which double-pole insulated cable is prescribed  
6) Heat-resistant  
7) Amber lamp for clear indicators  
8) Filled with xenon for high luminance  
9) With plastic lampholder MF for printed circuit boards 2 mm thick; also available as MFX version for 1.5 mm printed circuit boards  
10) On request  
11) Successor to BILLUX® AS® R2 (7951)  
12) Strict geometrical tolerances  
13) Lamps comply with ECE R 37 and SAE (DOT) regulations  
14) For projection headlights  
15) Discontinued

- 16) SAE and ECE approved  
17) COOL BLUE® version  
18) H11 with increased luminance  
19) Also available as MFX version for 1.5 mm printed circuit boards  
20) SUPER version with up to 30% higher luminance  
21) SILVERSTAR® version for more light on the road (up to 50%)  
22) With silver cap  
23) For operating an OSRAM D1 XENARC® electronic 35 W gas discharge lamp  
24) To IEC  
25) SAE category reference, H4 with strict geometrical tolerances  
26) LCL = 9.2 mm

# Type summary by ECE/SAE standard

International category	Rated voltage V	Rated wattage W	Base	Product reference	Page
C0.6W	6	0.6	E10	3708	27
C2.4W	6	2.4	EP10	3724	27
C5W	6	5	SV8.5-8	6416	22
C5W	12	5	SV8.5-8	6418	22
C5W	12	5	SV8.5-8	6418D	16
C5W	24	5	SV8.5-8	6423	22
C21W	12	21	SV8.5-8	6476	22
D1R	*	35	PK32d-3	66052	13, 18
D1S	*	35	PK32d-2	66042	13, 18
D2S	*	35	P32d-2	66040	13, 18
D2R	*	35	P32d-3	66050	13, 18
G6	13.5	0.59 A	BA15s	67	19
G6	13.5	0.69 A	BA15s	97	19
H1	12	55	P14.5s	64150	11, 18, 26
H1	12	55	P14.5s	64150SUP	11
H1	12	55	P14.5s	64150SVS	11
H1	12	55	P14.5s	64150L	17
H1	12	55	P14.5s	64150ALS	11
H1	12	55	P14.5s	64150S	11
H1	12	55	P14.5s	64150CB	11
H1	12	55	P14.5s	64150D	16
H1	24	70	P14.5s	64155	11
H2	12	55	X511	64173	11
H2	24	70	X511	64175	11
H3	12	55	PK22s	64151	11, 18, 26
H3	12	55	PK22s	64151SUP	11
H3	12	55	PK22s	64151L	17
H3	12	55	PK22s	64151S	11
H3	12	55	PK22s	64151ALS	11
H3	12	55	PK22s	64151CB	11
H3	24	70	PK22s	64156	11
H4	12	60/55	P43t	64193	10, 26
H4	12	60/55	P43t	64193ALS	10
H4	12	60/55	P43t	64193L	17
H4	12	60/55	P43t	64193CB	10
H4	12	60/55	P43t	64193D	16
H4	12	60/55	P43t	94193	16, 26
H4	12	60/55	P43t	64193SUP	10
H4	12	60/55	P43t	64193SVS	10
H4	24	75/70	P43t	64196	10
H4	24	75/70	P43t	94196	16
H6W	12	6	BAX9s	64132	21
H6W	12	6	BAX9s	64132L	17
H6W	12	6	BAX9s	64132CB	21
H6W	12	6	BAX9s	64132D	16
H7	12	55	PX26d	64210CB	11
H7	12	55	PX26d	64210D	16
H7	12	55	PX26d	64210SVS	11
H7	12	55	PX26d	64210	11, 18, 26
H7	12	55	PX26d	64210L	17
H7	12	55	PX26d	64210ALL	11
H7	24	70	PX26d	64215	11
H8	12	35	PGJ19-1	64212	12, 18, 26
H9	12	65	PGJ19-5	64213	12, 18, 26
H10	12	42	PY20d	9145	12, 18
H11	12	55	PGJ19-2	64211SUP	12, 26
H11	12	55	PGJ19-2	64211	12, 18, 26
H11	24	70	PGJ19-2	64216	12
H12	12	53	PZ20d	9055	12, 18
H21W	12	21	BAY9s	64136	21
H21W	24	21	BAY9s	64138	21
HB1	12	65/45	P29t	9004	18
HB2/H4	12	60/55	P43t	9003CB	10, 18
HB2/H4	12	60/55	P43t	9003L	10, 17, 18
HB2/H4	12	60/55	P43t	9003XV	10, 18
HB3	12	60	P20d	9005	12, 18
HB3	12	60	P20d	9005CB	12, 18
HB3A	12	60	P20d	9005XS	12, 18
HB4	12	51	P22d	9006	12, 18
HB4	12	51	P22d	9006CB	12, 18
HB4A	12	51	P22d	9006XS	12, 18

International category	Rated voltage V	Rated wattage W	Base	Product reference	Page
HB5	12	65/55	PX29t	9007	18
HS1	12	35/35	PX43t	64185	26
HS2	6	15	PX13.5s	64130	27
HS2	12	15	PX13.5s	64131	27
HS3	6	2.4	PX13.5s	64100	27
P21W	6	21	BA15s	7501	20
P21W	12	21	BA15s	7506	20
P21W	12	21	BA15s	7506L	17
P21W	24	21	BA15s	7511	20
P21W	24	21	BA15s	9511	16
P21/4W	12	21/4	BAZ15d	7225	21
PY21W	12	21	BAU15s	7507	20
PY21W	12	21	BAU15s	7507LDA	17, 20
PY21W	24	21	BAU15s	9507	16, 20
PY27/7W	12	27/7	WX2.5x16q	3757AK	20
P21/5W	12	21/5	BAY15d	7528	21
P21/5W	12	21/5	BAY15d	7528D	16
P21/5W	12	21/5	BAY15d	7528L	17
P21/5W	24	21/5	BAY15d	7537	21
P27W	12	27	W2.5x16d	3156	20
P27/7W	12	27/7	W2.5x16q	3157	21
R2	12	45/40	P45t	7951	10
R2	12	45/40	P45t	64183	10, 26
R2	24	55/50	P45t	7952	10
R5W	6	5	BA15s	5006	22
R5W	12	5	BA15s	5007	22
R5W	12	5	BA15s	5007D	16
R5W	12	5	BA15s	5007L	17
R5W	12	5	BA15d	5407	22
R5W	24	5	BA15s	5627	22
R5W	24	5	BA15s	9627	16
R5W	24	5	BA15d	5626	22
R10W	6	10	BA15s	5001	22
R10W	12	10	BA15s	5008	22
R10W	12	10	BA15s	5008D	16
R10W	12	10	BA15s	5008L	17
R10W	24	10	BA15s	5637	22
R10W	24	10	BA15s	9637	16
S1	6	25/25	BA20d	7323	26
S1	12	25/25	BA20d	7326	26
S2	6	35/35	BA20d	7324	26
S2	12	35/35	BA20d	7327	26
S3	6	15	P26s	7130	27
S3	12	15	P26s	7135	27
S8	12.8	1.8 A	BA15s	1073	19
S8	12.8	2.1 A	BA15s	1156	19
S8	12.8	2.1/	BAY15d	1157	19
	- 14	0.59 A			
T31/4	12	0.27 A	W2.1x9.2d	194	19
T31/4	12	0.35 A	W2.1x9.2d	168	19
T4W	6	4	BA9s	3892	23
T4W	12	4	BA9s	3893	23
T4W	12	4	BA9s	3893CB	21
T4W	12	4	BA9s	3893D	16
T4W	24	4	BA9s	3930	23
T4W	24	4	BA9s	9930	16
W2.3W	12	2.3	W2x4.6d	2723	24
W16W	12	16	W2.1x9.5d	921	20
W21/5W	12	21/5	W3x16q	7515	21
W21W	12	21	W3x16d	7505	20
W3W	12	3	W2.1x9.5d	2821	24
W3W	24	3	W2.1x9.5d	2841	24
W5W	12	5	W2.1x9.5d	2825	24
W5W	12	5	W2.1x9.5d	2825L	17
W5W	12	5	W2.1x9.5d	2825CB	21
W5W	12	5	W2.1x9.5d	2825D	16
W5W	12	5	W2.1x9.5d	2825HCB	21
W5W	12	5	W2.1x9.5d	2826	24
W5W	24	5	W2.1x9.5d	2845	24
WY5W	12	5	W2.1x9.5d	2827	20, 24

\* In conjunction with ECG

# General information

## Standard packs

### General information

All OSRAM products are EAN coded on their packaging. Unless stated otherwise, the EAN codes listed in this catalogue relate to the smallest packaging unit.

The technical data is in accordance with DIN (German Industrial Standards) and IEC (International Electrotechnical Commission).

International Lamp Coding System ILCOS. In future editions of this Indoor and Outdoor Lighting catalogue, ILCOS codes will gradually be incorporated in addition to existing OSRAM references. This will enable lamp types to be specified without having to use a particular manufacturer's reference.

Unless otherwise indicated, all lamps are designed for a mains voltage of 230 V.

The lamp references are identical to the information on the diskettes provided to you for data input into your DP system.

### Types not listed:

Available on request. Surcharge for different bases and voltages.

There is a surcharge on order quantities different from the standard pack quantities listed in this catalogue because standard packs have to be broken open.

A handling charge of EUR 10.00 will be made for orders below the value of EUR 500.00 to cover low-volume costs.

Sales and shipments are based on the OSRAM Conditions of Supply and Payment valid on the contract date.

Technical data and dimensions are subject to the customary small tolerances.

Subject to technical modification and availability of supplies. The information in this catalogue supersedes information in previous catalogues.

® = Registered trademark

### Standard packs

There are considerable advantages in ordering original cartons/standard packs:

- prompt delivery
- no surcharges
- simple cost-saving warehouse handling
- no time-consuming checks when the goods arrive
- exact contents description on each stacked carton
- no danger of mistaking one type of lamp for another
- reduced risk of losses in transit
- reduced risk of breakage

# Symbols

## Automotive lamps

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 Int. ECE category

 SAE category

 ECE standard

 DIN standard

 Base colour

 for lamp

 Connector to lamp

 Connector to control gear

 Rated wattage in W

 Rated current in amps

 Voltage in V

 Mains frequency in Hz

 Temperature range

 Base

 Fig. No.

 Weight

 Width  $b$  in mm

 Height  $h$  in mm

 Length  $l$  in mm

 Normal pack/pcs.



Men just go for blue eyes.  
Profit from it.

5.12A OSRAM, OS CC, 81536 München O&M



We've now further improved the BILUX® H4 COOL BLUE® and tuned it to an icy 4000 Kelvin. So you can give your customers exactly what they want: namely, the coolest light on the H4 headlamp market. As H1 and H3 too, incidentally. Which makes for attractive cars. And still more attractive margins. [www.osram.com](http://www.osram.com)

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