

Halogen lamps.

The brilliant light of halogen lamps has a much higher luminous intensity than that of ordinary light bulbs. Things simply look better in it.

They give surfaces a scintillating shine and provide an enchanting effect as the spectral colors shimmer in the reflectors. No wonder that halogen lamps are so popular among interior designers. Because the lamps are so compact and because there is such a wide variety, from narrow spotlights to wall washers, they offer enormous scope for creative lighting. They also last up to five times as long as conventional incandescent lamps.

Halogen lamps are moving into more and more applications. They are regularly in use for example at trade fairs and exhibitions, in shops, offices and hotels and of course throughout the home.



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All the mains voltage halogen lamps shown are rated for the European line voltage of 230 V.

Other voltages are available on request.

For LED systems/LED lamps for general lighting see Chapter 8.

Halogen lamps – innovative light for a clear view of things.

Halogen lamps.

Bright natural looking light, long life and greatly reduced electricity costs are the strengths of our modern halogen lamps. You can use them to brighten up your entire home, business or restaurant, both inside and outside, with everything from small reading lights to large spotlights. We particularly recommend our innovative ENERGY SAVER halogen lamps. By saving on CO₂ emissions they help reduce the greenhouse effect.

Halogen lamps from OSRAM provide feel-good light that has a similar effect to natural light. All our halogen lamps are fully dimmable, so depending on your mood you can have them as bright as daylight or as cozy as you like.

OSRAM halogen lamps not only look good, they perform a wide range of functions. They provide light in furniture, display cabinets and small luminaires, and can transform entire rooms. Thanks to their internationally standardized bases, halogen lamps can now be used in almost any luminaire. Obviously we offer halogen lamps for applications that require direct ac power supplies and applications that require transformers. The HALOGEN ENERGY SAVER lamps from OSRAM with screw bases are particularly practical as they are simple direct replacements for ordinary light bulbs.

The bulb on a halogen lamp always remains clear so the output remains constant throughout the life of the lamp. This is thanks to the halogen in the filler gas which prevents the vaporized tungsten from being deposited on the bulb by combining with it and flowing back to the hot filament. The tungsten is then deposited back on the filament and the halogen released in the process returns to the cycle.

OSRAM ENERGY SAVER lamps offer energy savings of up to 30%. This is achieved through two different principles.



Reduction in losses through thermal radiation (IRC).

Special bulb geometry and a high-quality coating on the bulb that reflects the thermal radiation (infrared) ensure that the heat emitted by the filament is directed back to the filament. This means that the filament is heated further, and less electrical energy is therefore needed. This technology is used for all the ENERGY SAVER low-voltage lamps (12 V) because of the optimum geometrical conditions.

Reduction in heat losses via the filler gas (xenon).

The thermal conductivity of the filler gas decreases in proportion to the size of the gas atoms (mass and diameter). By selecting the right filler gas it is possible to reduce the heat lost from the tungsten filament via the gas. This also means that less electrical energy is needed to heat the filament. By using a filler gas with atoms that are as heavy as possible the vaporization of the tungsten atoms from the filament can also be slowed down. The life of the lamp is extended as a result. Of all the inert gases, xenon best meets these requirements. Despite the high costs involved we therefore use xenon as the filler gas for all high-voltage ENERGY SAVER lamps from OSRAM.

Other effects.

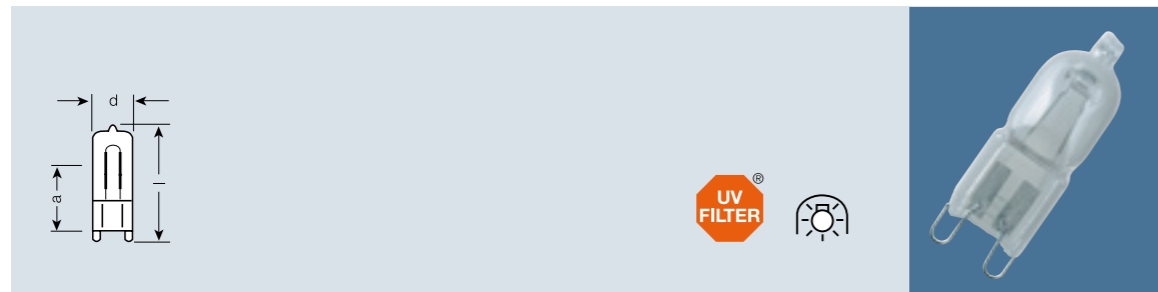
If we take into consideration the lower costs for air conditioning and also the lower costs for relamping thanks to the longer life of ENERGY SAVER lamps the cost savings compared to standard lamps such as the DECOSTAR® ES may be as high as 65% depending on the electricity price.

Benefits of ENERGY SAVER technology:



- Up to 65% cost savings
- Twice the average life for low-voltage halogen lamps and line-voltage halogen lamps with screw bases compared with equivalent standard lamps
- The luminous flux, luminous intensity and color perception remain constant throughout the life of the lamp
- Higher luminous efficacy
- Lower thermal output
- Lower power consumption

HALOPIN® ENERGY SAVER



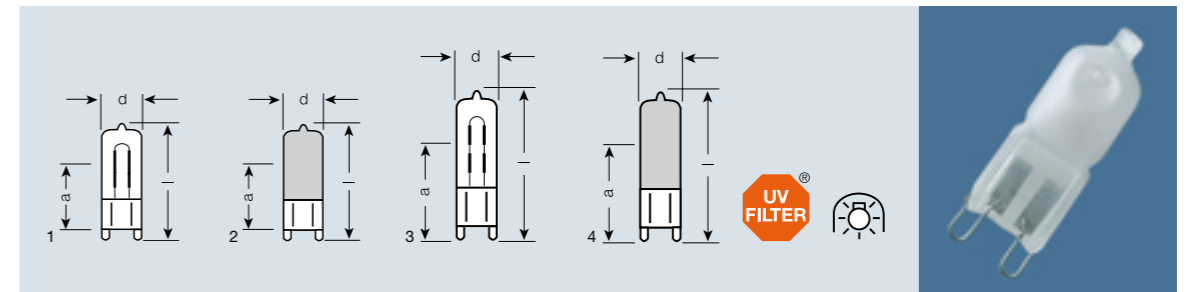
Product reference	Product number	W	V	lm	t [h]						
HALOPIN® ENERGY SAVER											
66733 ES	4008321208668	33	230	460	2000	G9	14	43	22	20	



HALOPIN® ENERGY SAVER lamps from OSRAM are direct replacements for standard 40 W HALOPIN® lamps. Not only do they provide light that is at least as brilliant, they save up to 20% energy and CO₂.

- Up to 20% energy savings
- Robust filament design thanks to innovative, unique bulb pinch technology
- Complies with IEC 60432-3 thanks to integrated fuse function, the lamp shuts down reliably
- Approved for use in open luminaires to IEC 60598-1
- No transformer required
- Simple handling thanks to G9 plug-in base/holder system
- Color temperature approx. 2900 K
- Average life of 2000 hours
- Dimmable
- Extremely compact dimensions

HALOPIN®



Product reference	Product number	W	V	lm	t [h]							No.
HALOPIN®												
clear												
66725	4050300791777	25	230	260	2000	G9	14	43	22	20	1	
66740	4050300791791	40	230	490	2000	G9	14	43	22	20	1	
66660	4050300198286	60	230	820	2000	G9	14	51	26,5	20	3	
66675	4050300198323	75	230	1100	2000	G9	14	51	26,5	20	3	
frosted												
66725 AM	4050300791920	25	230	230	2000	G9	14	43	22	20	2	
66740 AM	4050300791753	40	230	460	2000	G9	14	43	22	20	2	
66660 AM	4050300198309	60	230	790	2000	G9	14	51	26,5	20	4	
66675 AM	4050300198347	75	230	1050	2000	G9	14	51	26,5	20	4	

With HALOPIN®, OSRAM has developed an innovative solution for line voltage lamps and continued the trend towards miniaturization.

As a mini line voltage halogen lamp, HALOPIN® is ideal for modern luminaires in living rooms.

- Extremely compact dimensions
- Robust filament design thanks to innovative, unique bulb pinch technology
- Complies with IEC 60432-3 thanks to integrated fuse function
- Approved for use in open luminaires to IEC 60598-1
- No transformer required
- Simple handling thanks to G9 plug-in base/holder system
- Color temperature approx. 2900 K
- Average life of 2000 hours
- UV-FILTER
- Dimmable

DECOPIN®



Product reference	Product number	W	V	cd	t [h]	°	⊘	d max. [mm]	l max. [mm]	⊞
DECOPIN®										
60040 FL	4008321 907189	40	230	550	2000	40	G9	41,5	43	20

DECOPIN® is the world's smallest and lightest line voltage halogen lamp. Ideal for refined luminaires throughout the home.

- Incredibly small dimensions for revolutionary new luminaire designs
- Elegant aluminum reflector with optimized faceting
- Weighs just 9 grams
- No transformer required
- Innovative bulb pinch technology for the burner
- Meets the safety requirements of IEC 60432-3: the lamp shuts down reliably
- Approved for use in open luminaires (IEC 60598-1)
- Average life of 2000 hours
- Simple handling thanks to standardized G9 base
- Color temperature approx. 2900 K
- UV filter
- Dimmable

OSRAM HALOPAR® 16 ENERGY SAVER

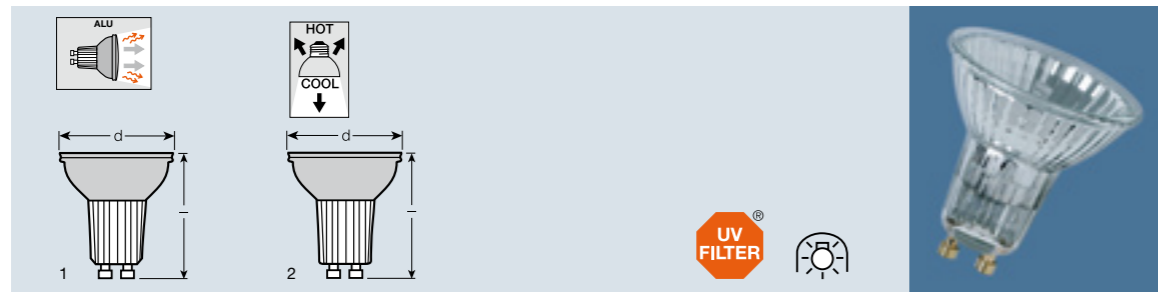


Product reference	Product number	W	V	cd ¹⁾	⊞	d max. [mm]	l max. [mm]	⊞
OSRAM HALOPAR® 16 ENERGY SAVER								
64823 ES FL	4008321 208767	40	230	900	GU10	51	55	20

HALOPAR ENERGY SAVER lamps from OSRAM are direct replacements for standard 50 W HALOPAR 16 lamps. Not only do they provide light that is as brilliant, they save up to 20% energy and CO₂.

- Up to 20% energy savings
- Average life of 2000 hours
- With whole glass reflector for bright lighting effects
- Innovative bulb pinch technology for the burner and with integrated fuse function; complies with the safety requirements of IEC 60432-3
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Color temperature approx. 2900 K
- Dimmable

OSRAM HALOPAR® 16/20

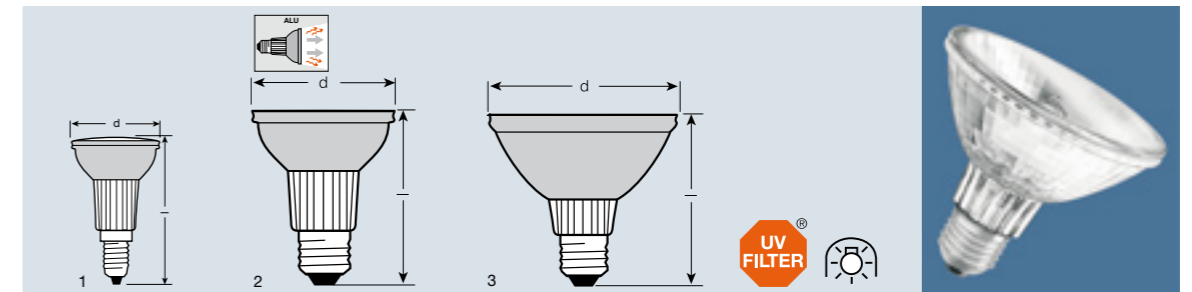


Product reference	Product number	W	V	cd ¹⁾	t [h]	°	mm	d max. [mm]	I max. [mm]	No.	
OSRAM HALOPAR® 16											
64824 FL	4050300580111	50	230	950	2000	35	GU10	51	55	20	1
64820 FL	4050300727165	35	230	600	2000	35	GU10	51	55	20	1
64826 FL	4050300501857	50	230	900	2000	35	GZ10	51	55	20	2
OSRAM HALOPAR® 20											
64830 FL	4050300856971	75	230	1900	2000	30	GU10	64	65,7	20	1

With its OSRAM HALOPAR® line voltage halogen lamps, OSRAM offers a real alternative to low-voltage reflector lamps. They do not require a transformer but still provide brilliant white halogen light. They are available in various wattages and with different beam angles, making them ideal for revitalizing rooms and providing accent lighting. OSRAM HALOPAR® 16 is ideal for modern small and stylish halogen luminaires and is the halogen line-voltage counterpart of the DECOSTAR®. It is available with an aluminum or dichroic reflector. The new OSRAM HALOPAR® 20 with a GU10 base, aluminum reflector and output of 75 W is a real powerhouse, making it ideal for accent lighting.

- Average life of 2000 hours
- With whole glass reflector for brilliant lighting effects
- Innovative bulb pinch technology for the burner and with integrated fuse function; complies with the safety requirements of IEC 60432-3
- Approved for use in open luminaires (to IEC 60598-1)
- No transformer required
- UV-FILTER
- Color temperature approx. 2900 K
- Dimmable

OSRAM HALOPAR® 16/20/30

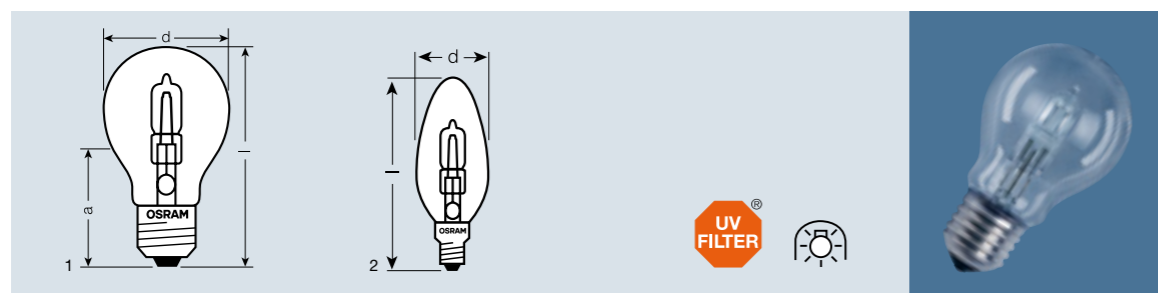


Product reference	Product number	W	V	cd ¹⁾	t [h]	°	mm	d max. [mm]	I max. [mm]	No.	
OSRAM HALOPAR® 16											
64822 FL	4050300938479	40	230	650	2000	35	E14	51	75	20	1
OSRAM HALOPAR® 20											
64832 SP	4050300406800	50	230	3000	2000	10	E27	64,5	91	15	2
64832 FL	4050300406824	50	230	1000	2000	30	E27	64,5	91	15	2
64836 SP	4050300406848	50	230	3200	2000	10	E27	64,5	91	15	2
64836 FL	4050300406862	50	230	1100	2000	30	E27	64,5	91	15	2
OSRAM HALOPAR® 30											
64841 SP	4050300338460	75	230	6900	2000	10	E27	97	90,5	15	3
64841 FL	4050300338484	75	230	2200	2000	30	E27	97	90,5	15	3
64845 SP	4050300338521	75	230	7500	2000	10	E27	97	90,5	15	3
64845 FL	4050300338507	75	230	2400	2000	30	E27	97	90,5	15	3

With its OSRAM HALOPAR® line voltage halogen lamps, OSRAM offers a brilliant and modern alternative to conventional reflector lamps. With their standard E14 and E27 screw bases they are quick and easy to install instead of ordinary light bulbs; they provide more light and last twice as long.

- More light than conventional reflector lamps
- Average life of 2000 hours
- With whole glass reflector for brilliant lighting effects
- Complies with the requirements of IEC 60432-3
- Approved for use in open luminaires (to IEC 60598-1)
- UV-FILTER
- Color temperature approx. 2900 K
- Dimmable

HALOGEN ENERGY SAVER CLASSIC A HALOGEN ENERGY SAVER CLASSIC B



Product reference	Product number	W	V	lm	t [h]		d max. [mm]	l max. [mm]	a		No.	
HALOGEN ENERGY SAVER CLASSIC A												
64541 A ES ¹⁾	4008321927163	18	230	220	2000	E27	56	96	73	20	1	
64542 A ES	4008321211828	28	230	345	2000	E27	56	96	73	20	1	
64543 A ES	4008321212078	42	230	630	2000	E27	56	96	73	20	1	
64544 A ES ¹⁾	4008321927187	52	230	840	2000	E27	56	96	73	20	1	
64547 A ES ¹⁾	4008321927200	70	230	1240	2000	E27	56	96	73	20	1	
64548 A ES ¹⁾	4008321928153	105	230	1900	2000	E27	56	96	73	20	1	
64541 A ES FR ¹⁾	4008321927224	18	230	220	2000	E27	56	96	73	20	1	
64542 A ES FR	4008321917287	28	230	345	2000	E27	56	96	73	20	1	
64543 A ES FR	4008321917300	42	230	630	2000	E27	56	96	73	20	1	
64544 A ES FR ¹⁾	4008321927248	52	230	840	2000	E27	56	96	73	20	1	
64547 A ES FR ¹⁾	4008321927262	70	230	1240	2000	E27	56	96	73	20	1	
64548 A ES FR ¹⁾	4008321928177	105	230	1900	2000	E27	56	96	73	20	1	
HALOGEN ENERGY SAVER CLASSIC B												
64541 B ES ¹⁾	4008321927286	18	230	220	2000	E14	35	104	67	15	2	
64542 B ES	4008321212153	28	230	345	2000	E14	35	104	67	20	2	
64543 B ES ¹⁾	4008321927309	42	230	630	2000	E14	35	104	67	15	2	
64541 B ES FR ¹⁾	4008321927323	18	230	216	2000	E14	35	104	67	15	2	
64542 B ES FR	4008321917324	28	230	345	2000	E14	35	104	67	20	2	
64543 B ES FR ¹⁾	4008321927347	42	230	630	2000	E14	35	104	67	15	2	

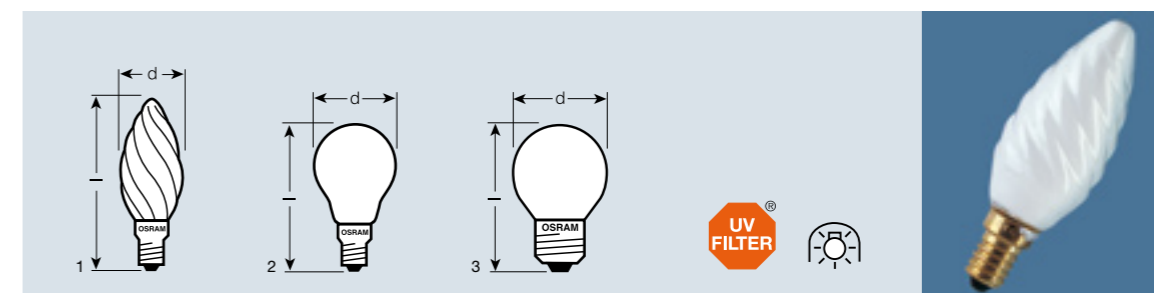
HALOGEN ENERGY SAVER: 30% energy savings and direct replacement for ordinary light bulbs.

HALOGEN ENERGY SAVER lamps are available in the classic shapes of bulb, candle and spot. Ordinary light bulbs can therefore be replaced, like for like, in no time at all. HALOGEN ENERGY SAVER lamps provide light that is as attractive as that from an ordinary light bulb. They also save up to 30% energy and last twice as long as an ordinary light bulb.

- Familiar bulb shape
- Up to 30% energy savings
- Average life: 2000 hours
- Bright white halogen light
- Simple operation on line voltage without a transformer
- Dimmable
- Color temperature approx. 2900 K

Ordinary light bulb A, B, BW, P, R50, R63, R80	→	HALOGEN ENERGY SAVER A, B, BW, P, R50, R63, R80
25 W	→	18 W
40 W	→	28 W
60 W	→	42 W
75 W	→	52 W
100 W	→	70 W
150 W	→	105 W

HALOGEN ENERGY SAVER CLASSIC BW HALOGEN ENERGY SAVER CLASSIC P

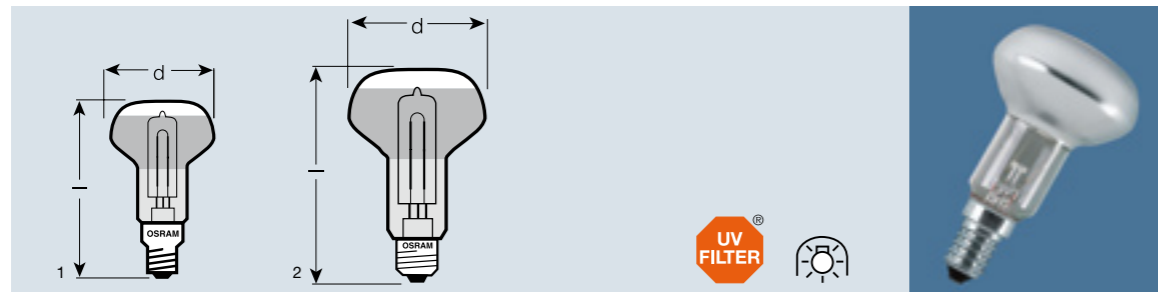


Product reference	Product number	W	lm	t [h]		d max. [mm]	l max. [mm]		No.
HALOGEN ENERGY SAVER CLASSIC BW¹⁾³⁾									
64542 BW ES	4008321927385	28	345	2000	E14	35	104	20	1
64542 BW ES FR	4008321928191	28	345	2000	E14	35	104	20	1
HALOGEN ENERGY SAVER CLASSIC P²⁾³⁾									
64541 P ES	4008321927446	18	220	2000	E14	45	80	20	2
64542 P ES	4008321927460	28	345	2000	E14	45	80	20	2
64543 P ES	4008321927484	42	630	2000	E14	45	80	20	2
64541 P ES FR	4008321927507	18	220	2000	E14	45	80	20	2
64542 P ES FR	4008321927521	28	345	2000	E14	45	80	20	2
64543 P ES FR	4008321927545	42	630	2000	E14	45	80	20	2
64541 P ES	4008321927569	18	220	2000	E27	45	74	20	3
64542 P ES	4008321927583	28	345	2000	E27	45	74	20	3
64543 P ES	4008321927606	42	630	2000	E27	45	74	20	3
64541 P ES FR	4008321927620	18	220	2000	E27	45	74	20	3
64542 P ES FR	4008321927644	28	345	2000	E27	45	74	20	3
64543 P ES FR	4008321927668	42	630	2000	E27	45	74	20	3

HALOGEN ENERGY SAVER Classic BW and P offer energy savings of up to 30% compared with ordinary light bulbs and provide a pleasant attractive light. They are the perfect alternatives to ordinary light bulbs as they provide the following benefits:

- Familiar bulb shape
- Up to 30% energy savings
- Average life: 2000 hours
- Attractive white halogen light
- Simple operation on line voltage without a transformer
- Dimmable
- Color temperature approx. 2900 K

HALOGEN ENERGY SAVER SPOT R50/R63/R80



ENERGY SAVER

Product reference	Product number	W	V	cd	t[h]	°	mm	mm	mm	No.	
HALOGEN ENERGY SAVER SPOT R50											
64545 R50 ES	4008321212115	28	230	430	2000	30	E14	51	87	20	1
HALOGEN ENERGY SAVER SPOT R63											
64546 R63 ES	4008321212139	42	230	960	2000	30	E27	64	105	20	2



HALOGEN ENERGY SAVER: less energy. More light.

The clever alternative to ordinary light bulbs. With its new HALOGEN ENERGY SAVER lamps, OSRAM can offer a large range of attractive lamps with screw bases for replacement of less efficient light bulbs. And of course they bring with them the familiar impressive benefits of halogen lamps such as twice the life and pure bright halogen light.

- Familiar bulb shape
- Up to 30% energy savings
- Cost-effective halogen alternative for direct replacement of conventional spotlight lamps
- E14 (R50) and E27 (R63) screw bases
- Average life of 2000 hours
- Significantly lower CO₂ emissions
- Lower thermal output
- Color temperature approx. 2800 K
- Fully dimmable



ENERGY SAVER

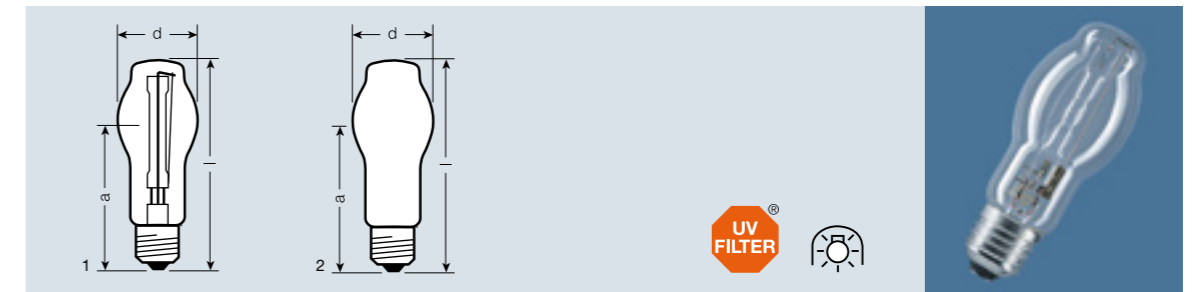
NEW

Product reference	Product number	W	cd	t[h]	mm	mm	mm	
HALOGEN ENERGY SAVER SPOT R80¹⁾								
64546 R80	4008321927682	42	960	2000	E27	80	116	20

The largest HALOGEN ENERGY SAVER Spot is the energy-saving alternative to conventional reflector lamps and offers the following benefits:

- Familiar bulb shape
- 30% energy savings compared with a conventional 60 W reflector lamp
- Twice the life
- Attractive white halogen light
- Simple operation on line voltage without a transformer
- Dimmable
- Color temperature approx. 2900 K

HALOLUX® BT

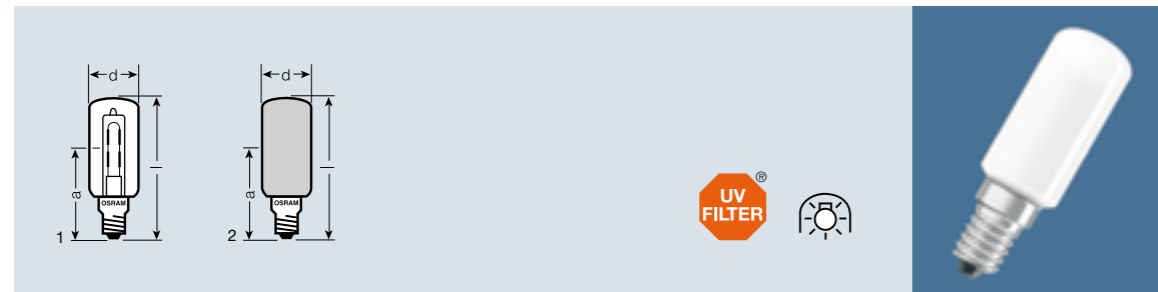


Product reference	Product number	W	V	lm	t[h]	mm	mm	mm	mm	No.	
HALOLUX® BT											
clear											
64470 BT	4050300588957	40	230	490	2000	E27	48	117	75	10	1
64472 BT	4050300100753	60	230	840	2000	E27	48	117	75	10	1
64476 BT	4050300100838	100	230	1600	2000	E27	48	117	75	10	1
64478 BT	4050300100913	150	230	2550	2000	E27	48	117	75	10	1
silicated											
64470 BT SIL	4050300598154	40	230	460	2000	E27	48	117	75	10	2
64472 BT SIL	4050300348711	60	230	780	2000	E27	48	117	75	10	2
64476 BT SIL	4050300348797	100	230	1450	2000	E27	48	117	75	10	2
64478 BT SIL	4050300348872	150	230	2100	2000	E27	48	117	75	10	2

HALOLUX® BT is the decorative halogen substitute for ordinary light bulbs and will make even simple luminaires look more attractive:

- Original decorative bulb shape
- Available in a higher wattages up to 150 W
- Up to 20% more light than ordinary light bulbs
- Twice the life¹⁾
- Brilliant halogen light
- Color temperature of approx. 2900 K
- Dimmable
- UV-FILTER

HALOLUX® T



Product reference	Product number	W	V	lm	t [h]						
HALOLUX® T											
Tubular/clear											
64860 T	4050300500942	25	230	260	1500	E14	26	80	55	15	1
64861 T	4050300363707	40	230	490	1500	E14	26	80	55	15	1
64862 T	4050300331638	60	230	820	2000	E14	26	80	55	15	1
Tubular/frosted											
64861 TIM	4050300394015	40	230	460	1500	E14	26	80	55	15	2
64862 TIM	4050300386362	60	230	790	2000	E14	26	80	55	15	2

OSRAM HALOLUX® T is the decorative halogen alternative to conventional candle and tubular lamps, creating attractive effects in an instant:

- Attractive bulb shape
- Up to 30% more light than ordinary light bulbs
- Twice the life¹⁾
- Brilliant halogen light
- Dimmable
- Color temperature approx. 2900 K
- UV-FILTER

HALOLUX CERAM®

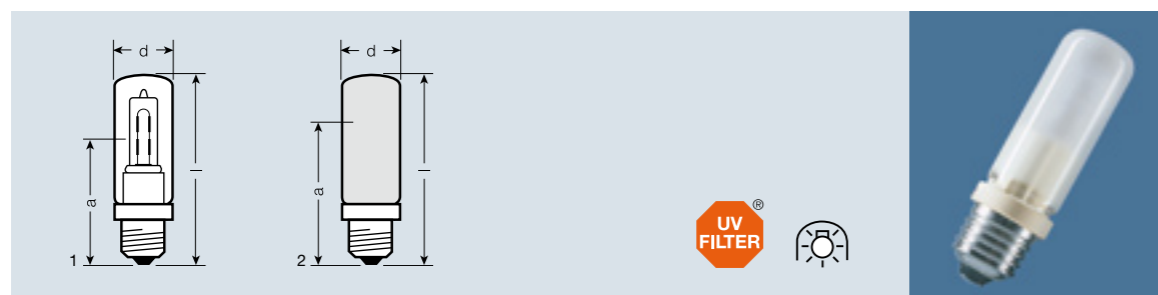


Product reference	Product number	W	V	lm	t [h]						
HALOLUX CERAM®											
clear											
64466	4008321035233	25	230	260	1500	B15d	12,4	67	42	12	1
64467	4008321035271	40	230	490	1500	B15d	12,4	67	42	12	1
64481	4008321035493	60	230	820	2000	B15d	12,4	67	42	12	1
64469	4008321035455	60	230	820	2000	B15d	12,4	86	58	12	1
64473	4008321035578	75	230	1100	2000	B15d	12,4	86	58	12	1
64475	4008321035851	100	230	1500	2000	B15d	12,4	86	58	12	1
64471	4008321036056	150	230	2500	2000	B15d	12,4	86	58	12	1
64477	4008321036018	150	230	2500	2000	B15d	12,4	98	70	12	1
64479	4008321036193	230	230	4350	2000	B15d	12,4	98	70	12	1
outside frosted											
64466 AM	4008321035257	25	230	230	1500	B15d	12,4	67	42	12	2
64467 AM	4008321035295	40	230	460	1500	B15d	12,4	67	42	12	2
64481 AM	4008321035516	60	230	790	2000	B15d	12,4	67	42	12	2
64469 AM	4008321035479	60	230	790	2000	B15d	12,4	86	58	12	2
64473 AM	4008321035592	75	230	1050	2000	B15d	12,4	86	58	12	2
64475 AM	4008321035875	100	230	1470	2000	B15d	12,4	86	58	12	2
64471 AM	4008321036070	150	230	2400	2000	B15d	12,4	86	58	12	2
64477 AM	4008321036032	150	230	2400	2000	B15d	12,4	98	70	12	2
64479 AM	4008321036216	230	230	4210	2000	B15d	12,4	98	70	12	2

HALOLUX CERAM® with a B15d base is so slim it is perfect for narrow compact luminaires. It is available in wattages from 25 W to 230 W and does not require a transformer, making it the ideal lamp for modern stylish luminaires.

- Innovative bulb pinch technology for the burner
- With integrated fuse function; meets the requirements of IEC 60432-2
- Approved for use in open luminaires to IEC 60598-1
- No transformer required
- UV-FILTER
- Color temperature approx. 2900 K
- Dimmable

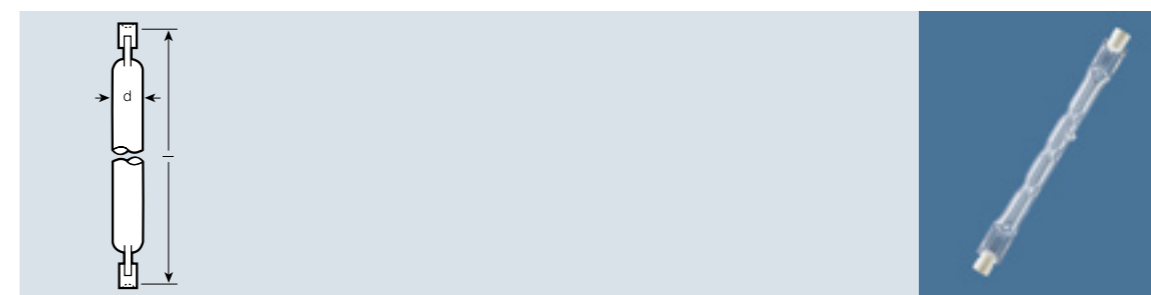
HALOLUX CERAM®



Product reference	Product number	W	V	lm	t [h]							
HALOLUX CERAM®												
clear												
64472	4008321035318	60	230	820	2000	E27		32	105	75	12	1
64474	4008321035530	75	230	1100	2000	E27		32	105	75	12	1
64476	4008321035837	100	230	1500	2000	E27		32	105	75	12	1
64478	4008321035974	150	230	2500	2000	E27		32	105	75	12	1
64480	4008321036155	230	230	4350	2000	E27		32	105	75	12	1
frosted												
64472 IM	4008321035431	60	230	790	2000	E27		32	105	75	12	2
64474 IM	4008321035554	75	230	1050	2000	E27		32	105	75	12	2
64476 IM	4008321035714	100	230	1470	2000	E27		32	105	75	12	2
64478 IM	4008321035998	150	230	2400	2000	E27		32	105	75	12	2
64480 IM	4008321036179	230	230	4210	2000	E27		32	105	75	12	2

- More compact dimensions than ordinary light bulbs
- Up to 20% more light than an ordinary light bulb
- Twice the life¹⁾
- Available in a higher wattages up to 230 W
- Innovative bulb pinch technology for the burner
- With integrated fuse function; meets the requirements of IEC 60432-2
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Color temperature approx. 2900 K
- Dimmable

HALOLINE® ENERGY SAVER



Product reference	Product number	W	V	lm ³⁾	t [h]					
HALOLINE® ENERGY SAVER										
64701 ES	4008321207692	230	230	5060	2000	R7s	12	114,2	2	20
64702 ES	4008321207715	400	230	9200	2000	R7s	12	114,2	2	20
64688 ES ²⁾	4008321928054	48	230	800	2000	R7s	12	74,9	2	20
64690 ES ¹⁾	4008321928078	80	230	1500	2000	R7s	12	74,9	2	20
64695 ES ¹⁾	4008321928092	120	230	2450	2000	R7s	12	74,9	2	20
64696 ES ²⁾	4008321928115	120	230	2300	2000	R7s	12	114,2	2	20
64698 ES ²⁾	4008321928139	160	230	3300	2000	R7s	12	114,2	2	20

Enclosed luminaires must be used with these halogen floodlight lamps for both indoor and outdoor applications. (In accordance with IEC 60598).
Fuse protection with the indicated values is recommended on the luminaire side (as per IEC 60357).

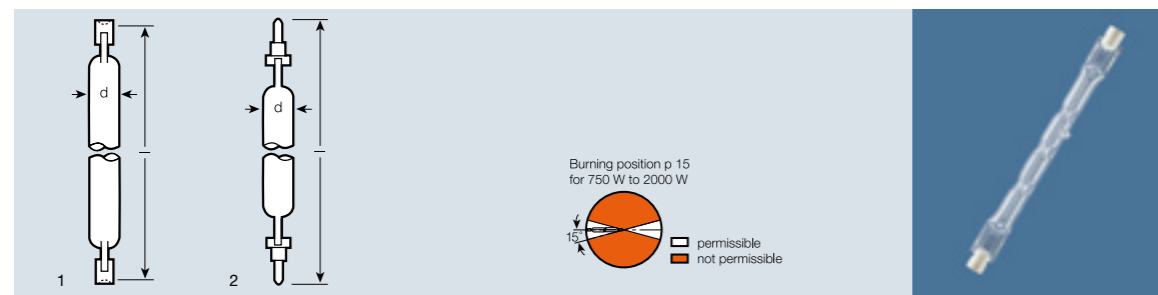
HALOLINE® ENERGY SAVER:

With its HALOLINE® ENERGY SAVER series OSRAM gives you a simple way of saving energy and protecting the environment at the same time. And you do not have to forego the excellent quality of light that brilliant halogen lamps provide. By replacing 500 W lamps with 400 W Energy Saver lamps you will save 100 W each time. That soon adds up. Just replace the lamps to start saving immediately and enjoy the pleasant atmosphere of halogen light. The range of applications for HALOLINE® ENERGY SAVER lamps is just as wide as it is for our HALOLINE Standard series. Whatever the application and whatever the burning position, HALOLINE® ENERGY SAVER lamps also help improve the efficiency with which valuable energy resources are used. This is made possible by using the highest quality materials and most advanced technologies to manufacture the lamps.

- Up to 20% energy savings
- Brilliant halogen light
- Ideal for emphasizing and accentuating the structure of a room
- 100% dimmable for a variable atmosphere
- Can be plugged in anywhere
- Color temperature approx. 3000 K
- Universal burning position
- Average life of 2000 hours
- Can be operated simply on line voltage without the need for a transformer

Standard HALOLINE		HALOLINE® ENERGY SAVER
60 W	→	48 W
100 W	→	80 W
150 W	→	120 W
200 W	→	160 W
300 W	→	230 W
500 W	→	400 W

HALOLINE® for line voltage



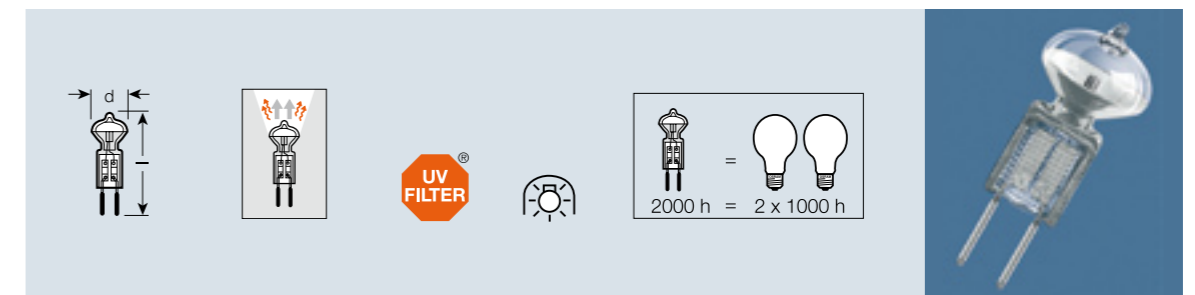
Product reference	Product number	W	V	lm	t [h]		d_{max} [mm]	l [mm]	A		No.
HALOLINE® for line voltage											
Universal burning position											
64688	4050300944425	60	230	840	2000	R7s	12	74,9	2	20	1
64690	4050300944340	100	230	1600	2000	R7s	12	74,9	2	20	1
64695	4050300944364	150	230	2500	2000	R7s	12	74,9	2	20	1
64696	4050300274744	150	230	2400	2000	R7s	12	114,2	2	20	1
64698	4050300004136	200	230	3500	2000	R7s	12	114,2	2	20	1
64701	4050300004143	300	230	5300	2000	R7s	12	114,2	2	20	1
64702	4050300004150	500	230	9500	2000	R7s	12	114,2	4	20	1
Burning position horizontal p 15											
64560	4050300004167	750	230	16500	2000	R7s	12	185,7	6.3	12	1
64740	4050300004174	1000	230	22000	2000	R7s	12	185,7	6.3	12	1
64760	4050300004181	1500	230	36000	2000	R7s	12	250,7	10	12	1
64783	4050300004198	2000	230	44000	2000	Fa4	12	334,4	10	12	2
64784	4050300004204	2000	230	44000	2000	R7s	12	327,4	10	12	1

Enclosed luminaires must be used with these halogen floodlight lamps for both indoor and outdoor applications. (In accordance with IEC 60598).
Fuse protection with the indicated values is recommended on the luminaire side (as per IEC 60357).

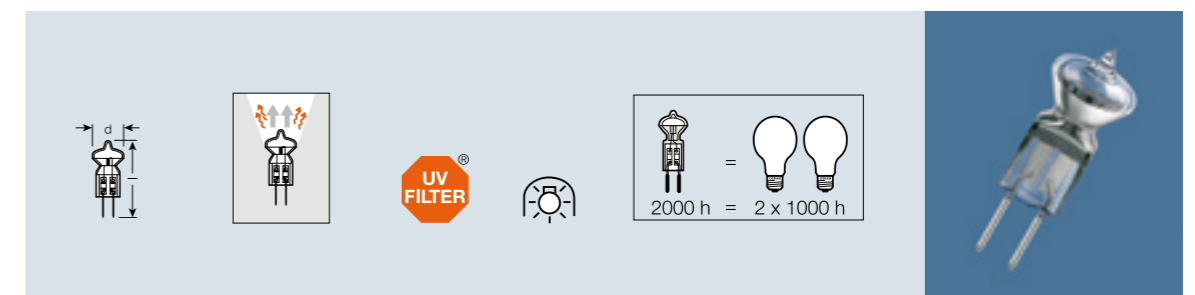
HALOLINE® can be used universally and is suitable for a wide range of applications. It is the classic lamp for small outdoor systems for floodlighting buildings and sports arenas and for security lighting. It is experiencing a renaissance in the home, where it is being used above all for indirect lighting to emphasize and accentuate the structure of rooms. HALOLINE® is also re-conquering classic applications, providing wide-area lighting from pendant luminaires in a wide range of new and exciting designs.

- Brilliant halogen light
- Ideal for emphasizing and accentuating the structure of a room
- 100% dimmable for a variable atmosphere
- Can be plugged in anywhere
- Color temperature approx. 3000 K
- Universal burning position up to and including 500 W
- Average life of 2000 hours
- Can be operated simply on line voltage without the need for a transformer

MINISTAR®



Product reference	Product number	W	V	cd	t [h]	α		d_{max} [mm]	l_{max} [mm]	
MINISTAR®, axial reflector, Ø 16 mm										
50020	4050300987217	20	12	800	2000	20	GY6.35	16	44	40
50035	4050300987224	35	12	1000	2000	30	GY6.35	16	44	40
50050	4050300987231	50	12	1400	2000	30	GY6.35	16	44	40



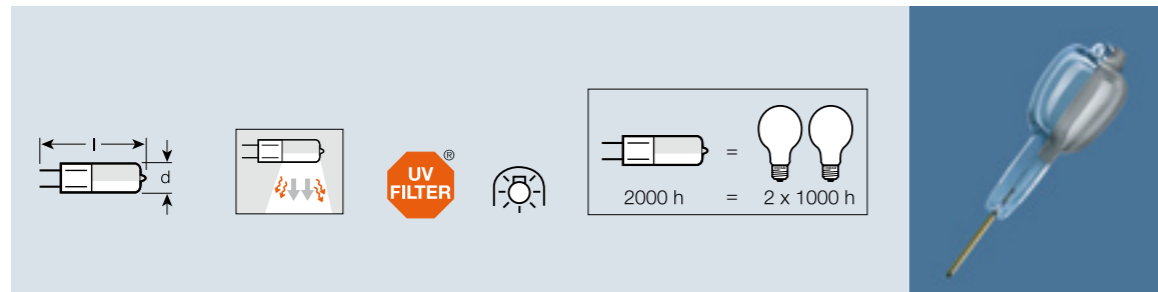
Product reference	Product number	W	V	cd	t [h]	α		d_{max} [mm]	l_{max} [mm]	
MINISTAR®, axial reflector, Ø 12 mm										
50210	4008321909275	10	12	250	2000	20	G4	12	33	40
50220	4008321909299	20	12	450	2000	20	G4	12	33	40

MINISTAR® follows the trend towards miniaturization in luminaires and opens up new horizons for impressive revolutionary luminaire designs.

The versions with the **axial reflector** can perform all the functions of modern spotlighting in a form that is more compact than ever before; available with GY6.35 and G4 bases. Recessed ceiling luminaires and flexible lighting systems are just two examples in which the benefits of these products really shine through.

- The smallest halogen axial reflector lamp in the world
- Extra long average life of 2000 hours
- Special coating for reduced thermal load in the luminaire
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K

MINISTAR® Side Reflector

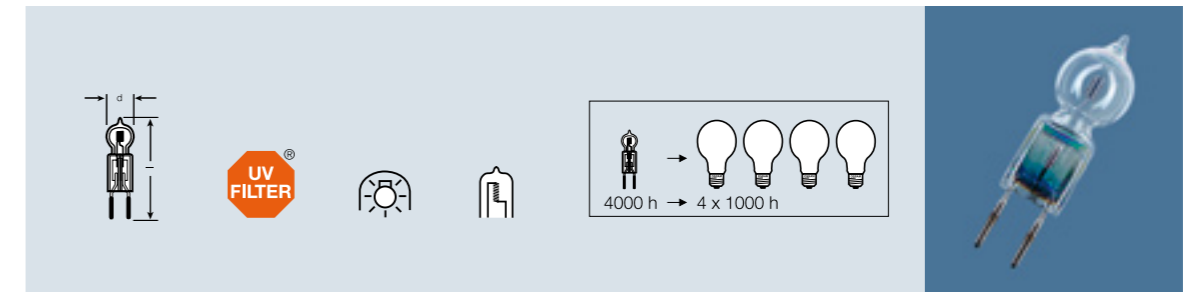


Product reference	Product number	W	V	cd	t(h)	°		d max. [mm]	l max. [mm]	
MINISTAR® Side Reflector										
50110	4050300987248	10	12	80	2000	35 / 60	G4	10	33	40
50120	4050300987255	20	12	120	2000	35 / 60	G4	10	33	40

The versions with the **side reflector** give designers the freedom to create completely new furniture luminaires, desktop luminaires and so on.

- The smallest halogen side reflector lamp in the world
- Average life of 2000 hours
- Special coating for reduced thermal load in the luminaire
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K

HALOSTAR® ENERGY SAVER



Product reference	Product number	W	V	lm	t(h)		d max. [mm]	l max. [mm]	a	
HALOSTAR® ENERGY SAVER										
64429 ES	4050300987262	25	12	500	4000	GY6.35	12	44	30	40
64432 ES	4050300615905	35	12	900	4000	GY6.35	12	44	30	40
64440 ES	4050300615936	50	12	1250	4000	GY6.35	12	44	30	40
64447 ES	4050300785400	65	12	1700	4000	GY6.35	12	44	30	40

Straight to the point.

With HALOSTAR® lamps, it is possible for light sources in "starlight ceilings", furniture luminaires and chandeliers for example to be on open display without the need for protective shields.

Thanks to IRC technology the HALOSTAR® ES needs much less energy to produce the same amount of light.

- Up to 60% cost savings¹⁾
- Long average life of 4000 hours
- High luminous efficacy of up to 26 lm/W
- Significantly lower CO₂ emissions due to energy savings
- Approved for use in open luminaires to IEC 60598-1
- Dimmable
- Color temperature of 3000 K
- Low thermal output
- Axial filament for optimum directional light
- Special pins for corrosion protection
- UV-FILTER

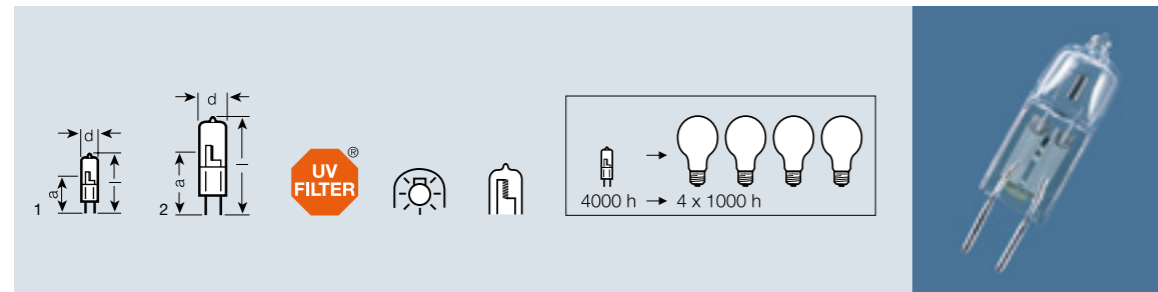
Standard pin-base lamp	HALOSTAR® ES
35 W →	25 W ES
50 W →	35 W ES
75 W →	50 W ES
90 W →	65 W ES

For more information on the system guarantee and the terms and conditions of the guarantee go to

www.osram.com/system-guarantee



HALOSTAR STARLITE®

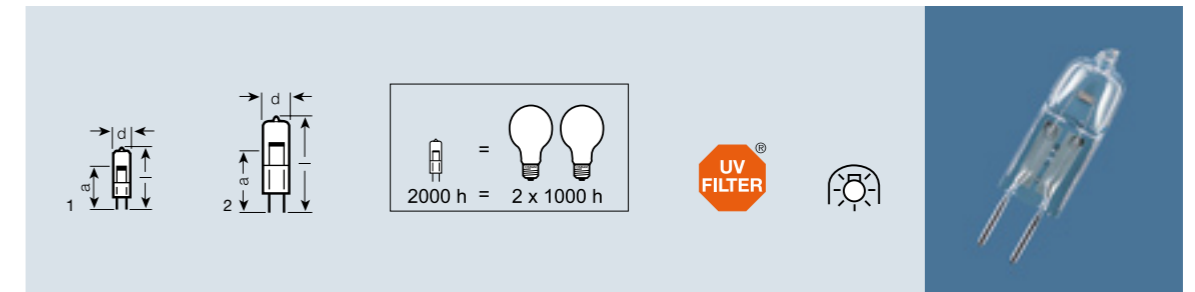


Product reference	Product number	W	V	lm	t[h]		d max. [mm]	I max. [mm]				No.
HALOSTAR STARLITE®												
64405 S ¹⁾	4050300335032	5	12	60	4000	G4	10	33	22	40	–	
64410 S	4050300335131	10	6	110	4000	G4	10	33	22	40	1	
64415 S	4050300335087	10	12	130	4000	G4	10	33	22	40	1	
64425 S	4050300335162	20	12	300	4000	G4	10	33	22	40	1	
64427 S	4050300328171	20	12	300	4000	GY6.35	12	44	30	40	2	
64432 S	4050300017426	35	12	600	4000	GY6.35	12	44	30	40	2	
64440 S	4050300328201	50	12	910	4000	GY6.35	12	44	30	40	2	
64450 S	4050300490151	75	12	1450	4000	GY6.35	12	44	30	40	2	
64458 S	4050300490182	90	12	1800	4000	GY6.35	12	44	30	40	2	

HALOSTAR STARLITE® lamps may be used in free-burning applications without a shield on the luminaire. They are made from UV-reducing quartz and comply with the strictest UV protection thresholds (to IEC 60432).

- Long average life of 4000 hours
- Axial filament for optimum directional light
- Special pins for corrosion protection
- Approved for use in open luminaires to IEC 60598-1
- Dimmable
- Color temperature of 3000 K

HALOSTAR® STANDARD

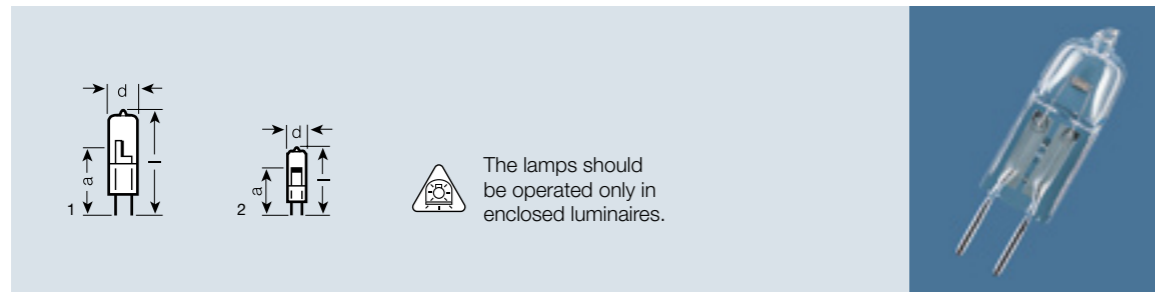


Product reference	Product number	W	V	lm	t[h]		d max. [mm]	I max. [mm]				No.
HALOSTAR® STANDARD												
clear												
64415	4050300010717	10	12	140	2000	G4	10	33	22	40	1	
64425	4050300003924	20	12	320	2000	G4	10	33	22	40	1	
64432	4050300364629	35	12	600	2000	GY6.35	12	44	30	40	2	
64440	4050300324432	50	12	910	2000	GY6.35	12	44	30	40	2	
frosted												
64415 F	4050300269047	10	12	130	2000	G4	10	33	22	40	1	
64425 F	4050300324388	20	12	300	2000	G4	10	33	22	40	1	
64432 F	4050300277332	35	12	570	2000	GY6.35	12	44	30	40	2	
64440 F	4050300325170	50	12	830	2000	GY6.35	12	44	30	40	2	

Free-burning halogen lamps such as HALOSTAR® STANDARD, have given lighting designers new freedom thanks to their brilliant, highly focused and decorative light.

- Average life 2000 hours
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K

HALOSTAR® 24 V HALOSTAR® oven lighting



Product reference	Product number	W	V	lm	t[h]		d max. [mm]	l max. [mm]	a [mm]		No.
HALOSTAR® 24 V series											
64435	4050300335513	20	24	320	1000	G4	9,5	33	22	40	2
64445	4050300335544	50	24	900	2000	GY6.35	12	44	30	40	1
64460	4050300335667	100	24	2200	2000	GY6.35	12	44	30	40	1
64465	4050300335698	150	24	3200	2000	GY6.35	16	50	32	40	1
HALOSTAR® oven lighting											
64408	4050300308029	5	12	60	2000 ¹⁾	G4	10	31	21,5	40	2
64418	4050300308081	10	12	140	2000 ¹⁾	G4	10	31	21,5	40	2
64428	4050300308050	20	12	320	2000 ¹⁾	G4	12	31	21,5	40	2

HALOSTAR® 24 V

UV-reducing quartz suppresses unwanted UV radiation. The UV-related bleaching effect as defined by IEC has therefore been reduced by up to 80% compared with conventional pin-base lamps. Complies with the strictest UV protection thresholds (IEC 60432).

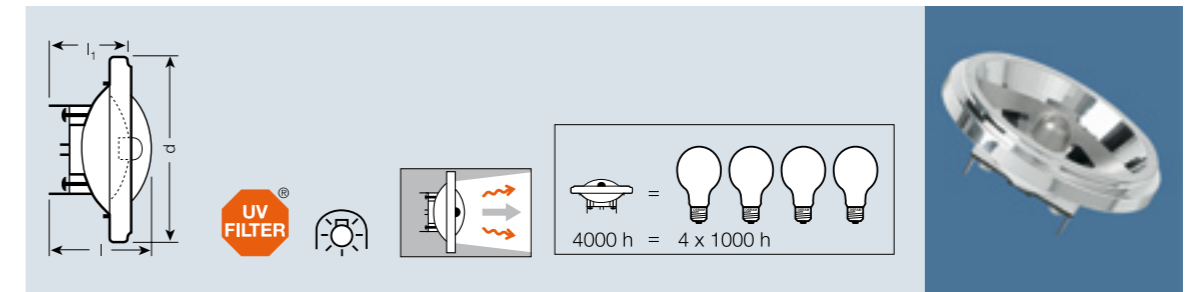
- The base pins are tempered to protect against corrosion
- The axial filament ensures optimum directional light
- High illuminance level

OSRAM HALOSTAR® oven

OSRAM HALOSTAR® for oven lighting has the following advantages over conventional oven lamps:

- Two to three times the luminous efficacy
- Optimum halogen content for high temperatures
- Tempered pins for reliable contact at high temperatures
- Suitable for pyrolysis (permissible ambient temperature 450 °C)

HALOSPOT® 111 ENERGY SAVER



Product reference	Product number	W	V	cd	t[h]			d max. [mm]	l max. [mm]	
HALOSPOT® 111 ENERGY SAVER										
48832 ES SP	4050300656823	35	12	22500	4000	8	G53 ¹⁾	111	67	6
48832 ES FL	4050300656847	35	12	4500	4000	24	G53 ¹⁾	111	67	6
48835 ES SP	4050300656861	50	12	33000	4000	8	G53 ¹⁾	111	67	6
48835 ES FL	4050300656885	50	12	5800	4000	24	G53 ¹⁾	111	67	6
48835 ES WFL	4008321909237	50	12	2000	4000	45	G53 ¹⁾	111	67	6
48837 ES SP	4050300786070	65	12	45000	4000	8	G53 ¹⁾	111	67	6
48837 ES FL	4050300786094	65	12	8500	4000	24	G53 ¹⁾	111	67	6
48837 ES WFL	4008321909251	65	12	2800	4000	45	G53 ¹⁾	111	67	6

HALOGEN ENERGY SAVER lamps from OSRAM have been designed for commercial applications. They combine impressive economy and luminous intensity with excellent quality of light. In combination with the revolutionary HighTech reflector the result is outstanding brightness.

- Up to 48% cost savings with IRC technology²⁾
- Long average life of 4000 hours
- New HighTech reflector for
 - optimum illumination
 - less scattered light
- The powerful light for professional applications
- Approved for use in open luminaires to IEC 60598-1
- Cap for reduced glare and ease of handling
- UV-FILTER
- Dimmable
- Significantly lower CO₂ emissions due to energy savings
- Color temperature of 3000 K

Applications:

Shoplighting, restaurants, hotels, art galleries, high-ceiling rooms, etc.

Standard-HALOSPOT 111	HALOSPOT® 111 ES
50 W →	35 W ES
75 W →	50 W ES
100 W →	65 W ES

For more information on the system guarantee and the terms and conditions of the guarantee go to www.osram.com/system-guarantee



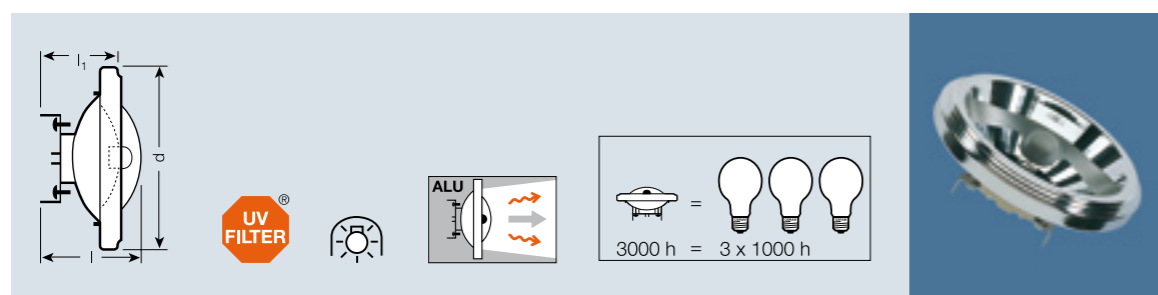
PIONEER OF IRC TECHNOLOGY

ENERGY SAVER

ADVANCED TECHNOLOGY



HALOSPOT® 111

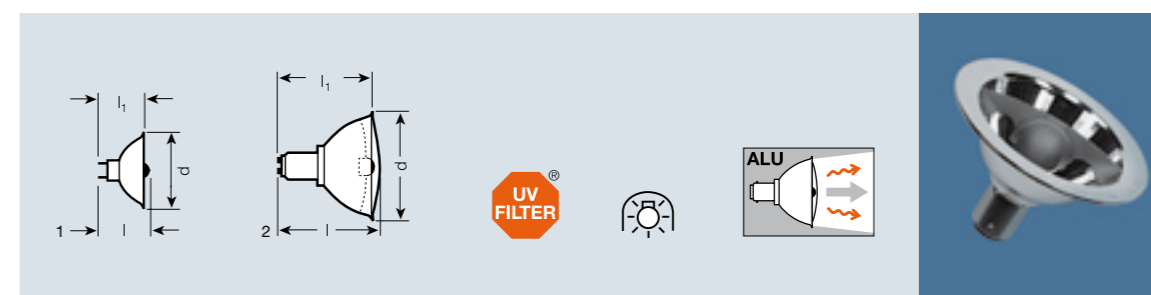


Product reference	Product number	W	V	cd	t [h]	°	⌀	d max. [mm]	l max. [mm]	⊞
HALOSPOT® 111										
41830 SSP	4050300011141	35	6	30000	3000	4	G53 ¹⁾	111	67	6
41832 SSP	4050300335728	35	12	35000	3000	4	G53 ¹⁾	111	67	6
41832 FL	4050300335766	35	12	2500	3000	24	G53 ¹⁾	111	67	6
41835 SSP	4050300011165	50	12	40000	3000	4	G53 ¹⁾	111	67	6
41835 SP	4050300011752	50	12	20000	3000	8	G53 ¹⁾	111	67	6
41835 FL	4050300011769	50	12	4000	3000	24	G53 ¹⁾	111	67	6
41835 WFL	4008321909213	50	12	1400	3000	45	G53 ¹⁾	111	67	6
41840 SP	4050300011776	75	12	30000	3000	8	G53 ¹⁾	111	67	6
41840 FL	4050300011783	75	12	5300	3000	24	G53 ¹⁾	111	67	6
41840 WFL	4050300011790	75	12	2000	3000	45	G53 ¹⁾	111	67	6
41850 SP	4050300358604	100	12	48000	3000	8	G53 ¹⁾	111	67	6
41850 FL	4050300358628	100	12	8500	3000	24	G53 ¹⁾	111	67	6
41850 WFL	4050300358642	100	12	2800	3000	45	G53 ¹⁾	111	67	6

HALOSPOT® 111 lamps have reflectors with excellent focusing properties and extremely tight beam angles of as little as 4° for enormous luminous intensity so that objects can be highlighted even in bright surroundings.

- Long average life of 3000 hours
- Powerful light
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Cap for reduced glare and ease of handling
- Dimmable
- Color temperature of 3000 K

HALOSPOT® 70 HALOSPOT® 48

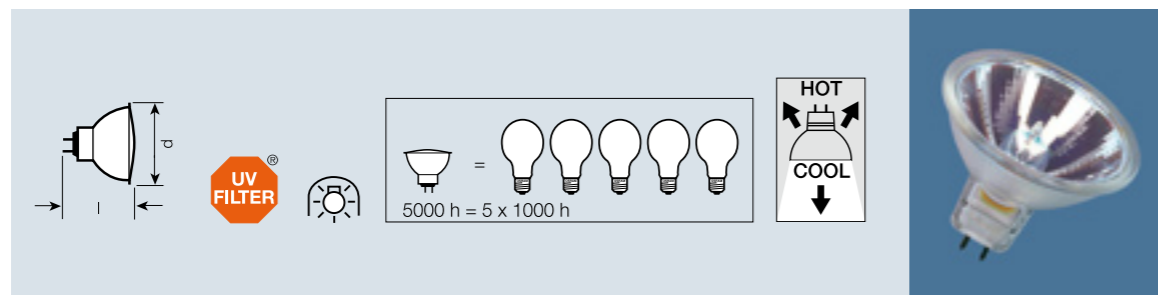


Product reference	Product number	W	V	cd	t [h]	°	⌀	d max. [mm]	l max. [mm]	⊞	No.
HALOSPOT® 70											
41970 SP	4050300010656	20	12	7700	3000	8	BA15d	70,5	50	10	2
41970 FL	4050300011110	20	12	900	3000	24	BA15d	70,5	50	10	2
41990 SP	4050300011158	50	12	12500	3000	8	BA15d	70,5	50	10	2
41990 FL	4050300004020	50	12	2600	3000	24	BA15d	70,5	50	10	2
HALOSPOT® 48											
41900 SP	4050300003962	20	12	3100	2000	8	GY4	48	38	10	1
41930 SP ¹⁾²⁾	4050300003979	20	24	2600	1000	8	GY4	48	38	10	1

The faceted reflector ensures the light is evenly distributed. The lamps are equipped with cap for reduced glare and ease of handling.

- UV-reducing quartz is used for the integral lamp. The lamp therefore complies with the strictest UV threshold values (as per IEC 60432) and their UV-related bleaching effect is reduced by up to 80%.
- 12 V versions in low-pressure design. The lamps may be used in free-burning applications without a shield on the luminaire in accordance with IEC 60598
- The high-pressure 24 V version requires a shield
- HALOSPOT® 70, 48 lamps are dimmable
- UV-FILTER
- Color temperature of 3000 K

DECOSTAR® 51 ENERGY SAVER



Product reference	Product number	W	V	cd	t [h]	°	mm	d max. [mm]	l max. [mm]	mm
DECOSTAR® 51 ENERGY SAVER										
48860 ES SP	4050300620169	20	12	6000	5000	10	GU5.3	51	46	20
48860 ES FL	4050300620183	20	12	2300	5000	24	GU5.3	51	46	20
48860 ES WFL	4050300620206	20	12	1000	5000	36	GU5.3	51	46	20
48860 ES VWFL	4050300620220	20	12	450	5000	60	GU5.3	51	46	20
48865 ES SP	4050300516592	35	12	12500	5000	10	GU5.3	51	46	20
48865 ES FL	4050300516615	35	12	4400	5000	24	GU5.3	51	46	20
48865 ES WFL	4050300516639	35	12	2200	5000	36	GU5.3	51	46	20
48865 ES VWFL	4050300516653	35	12	1100	5000	60	GU5.3	51	46	20
48870 ES SP	4050300516677	50	12	15000	5000	10	GU5.3	51	46	20
48870 ES FL	4050300516691	50	12	5700	5000	24	GU5.3	51	46	20
48870 ES WFL	4050300516714	50	12	2850	5000	36	GU5.3	51	46	20
48870 ES VWFL	4050300516738	50	12	1450	5000	60	GU5.3	51	46	20

The energy and money-saving lamp: DECOSTAR® ES.

Energy Saver lamps combine economy, luminous intensity and quality. What's more, these new lamps last up to 5000 hours.

The Longlife coating of the reflector ensures constant luminous intensity and color location. Thanks to innovative technology and the IRC infrared coating on these lamps you save a large amount of electricity and up to 65% in costs compared with standard halogen lamps. And the environment benefits too.

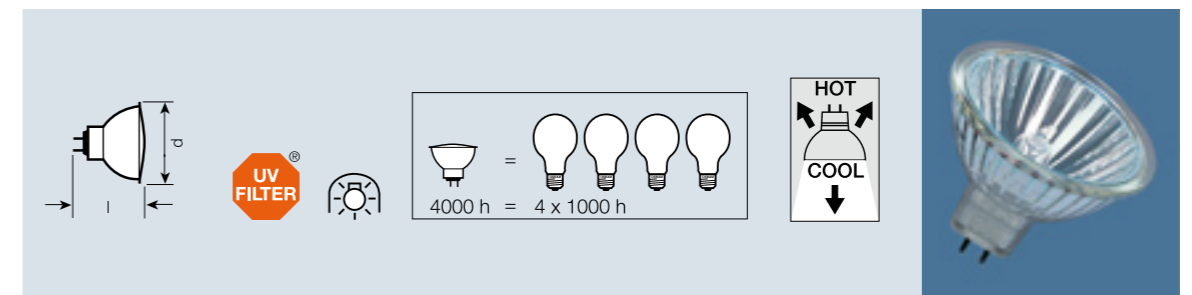
- Up to 65% cost savings through IRC technology¹⁾
- Extra long average life of 5000 hours
- Significantly lower CO₂ emissions due to energy savings
- Constant luminous intensity and color location throughout their life
- UV-FILTER
- Dimmable
- Color temperature of 3000 K
- Constant bluish appearance of the light escaping at the back of the reflector
- Dichroic reflector reduces the heat in the light beam by up to 66%
- Approved for use in open luminaires to IEC 60598-1

Standard dichroic reflector lamp	DECOSTAR® ES
35 W →	20 W ES
50 W →	35 W ES
65 W →	50 W ES



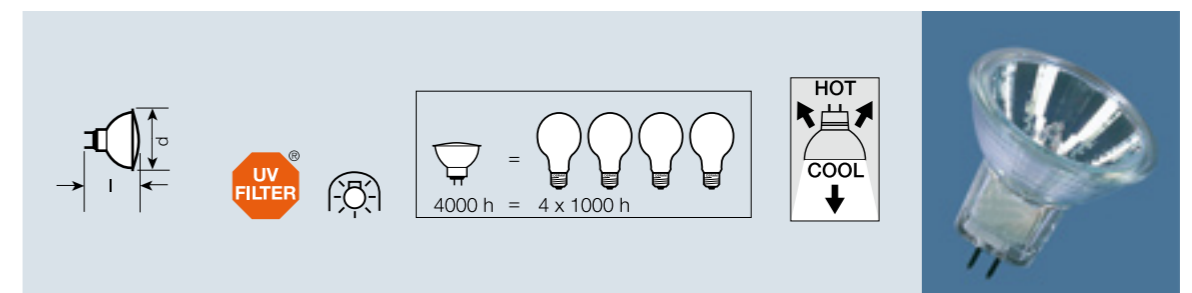
For more information on the system guarantee and the terms and conditions of the guarantee go to www.osram.com/system-guarantee

DECOSTAR® 51 TITAN DECOSTAR® 35 TITAN



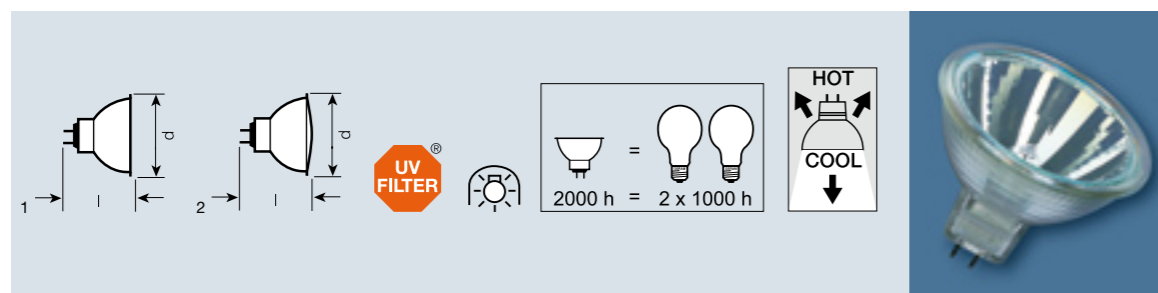
Product reference	Product number	W	V	cd	t [h]	°	mm	d max. [mm]	l max. [mm]	mm
DECOSTAR® 51 TITAN										
46860 SP	4050300428635	20	12	5000	4000	10	GU5.3	51	46	20
46860 WFL	4050300428659	20	12	780	4000	36	GU5.3	51	46	20
46860 VWFL	4050300428673	20	12	350	4000	60	GU5.3	51	46	20
46865 SP	4050300428697	35	12	8000	4000	10	GU5.3	51	46	20
46865 FL	4050300476414	35	12	3100	4000	24	GU5.3	51	46	20
46865 WFL	4050300428710	35	12	1500	4000	36	GU5.3	51	46	20
46865 VWFL	4050300428734	35	12	700	4000	60	GU5.3	51	46	20
46870 SP	4050300428758	50	12	12500	4000	10	GU5.3	51	46	20
46870 FL	4050300465708	50	12	4400	4000	24	GU5.3	51	46	20
46870 WFL	4050300428772	50	12	2200	4000	36	GU5.3	51	46	20
46870 VWFL	4050300428796	50	12	1200	4000	60	GU5.3	51	46	20

- Long average life of 4000 hours
- High luminous intensity
- Constant luminous intensity and color location throughout their life
- Constant bluish appearance of the light escaping at the back of the reflector
- Dichroic reflector reduces the heat in the light beam by up to 66%
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K



Product reference	Product number	W	V	cd	t [h]	°	mm	d max. [mm]	l max. [mm]	mm
DECOSTAR® 35 TITAN										
46890 SP	4050300529301	20	12	4000	4000	10	GU4	35	40	10
46890 WFL	4050300529325	20	12	700	4000	36	GU4	35	40	10
46892 SP	4050300529349	35	12	6200	4000	10	GU4	35	40	10
46892 WFL	4050300529363	35	12	1400	4000	36	GU4	35	40	10

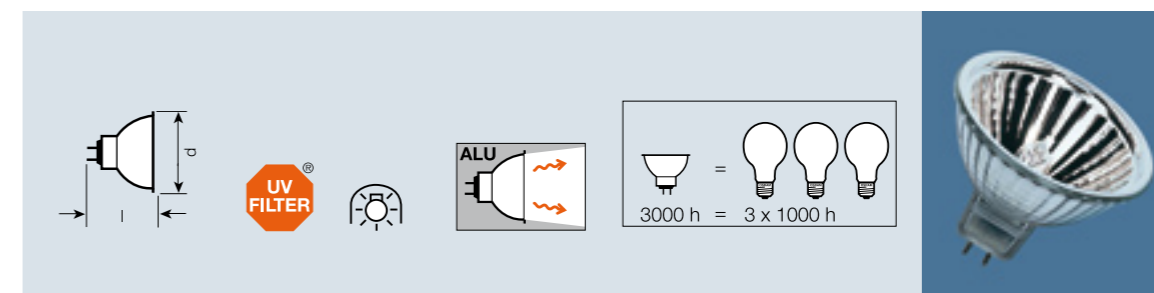
DECOSTAR® 51 STANDARD
DECOSTAR® 51S STANDARD



Product reference	Product number	W	V	cd	t[h]	°	mm	d max. [mm]	l max. [mm]	No.	
DECOSTAR® 51 STANDARD											
41860 SP ¹⁾	4050300012612	20	12	3150	2000	10	GU5.3	51	46	20	1
41860 WFL ¹⁾	4050300012629	20	12	510	2000	36	GU5.3	51	46	20	1
41865 SP ¹⁾	4050300026527	35	12	6300	2000	10	GU5.3	51	46	20	1
41865 WFL ¹⁾	4050300026541	35	12	1050	2000	36	GU5.3	51	46	20	1
41870 SP ¹⁾	4050300012636	50	12	8200	2000	10	GU5.3	51	46	20	1
41870 WFL ¹⁾	4050300012575	50	12	1500	2000	36	GU5.3	51	46	20	1
DECOSTAR® 51S STANDARD											
44860 SP	4050300272474	20	12	3000	2000	10	GU5.3	51	46	20	2
44860 WFL	4050300272511	20	12	480	2000	36	GU5.3	51	46	20	2
44865 SP	4050300272559	35	12	6000	2000	10	GU5.3	51	46	20	2
44865 WFL	4050300272634	35	12	1000	2000	36	GU5.3	51	46	20	2
44870 SP	4050300272672	50	12	7800	2000	10	GU5.3	51	46	20	2
44870 WFL	4050300272795	50	12	1450	2000	36	GU5.3	51	46	20	2

- Average life of 2000 hours
- Dichroic reflector reduces the heat in the light beam by up to 66%
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K

DECOSTAR® 51 ALU
DECOSTAR® 51 COOL BLUE®

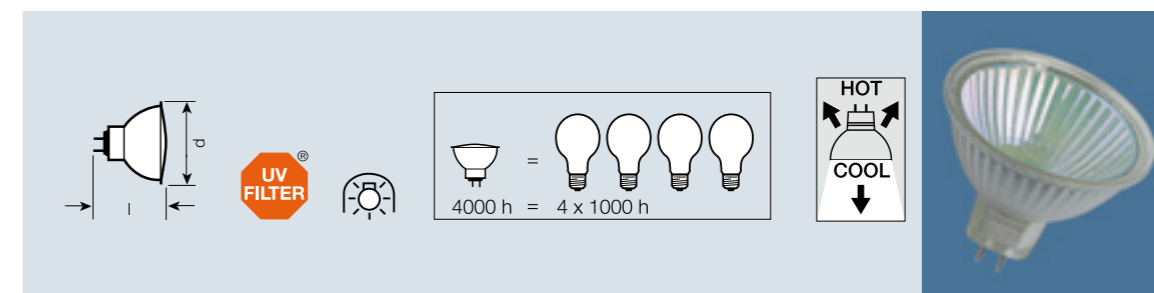


Product reference	Product number	W	V	cd	t[h]	°	mm	d max. [mm]	l max. [mm]	
DECOSTAR® 51 ALU										
41861 WFL	4050300428819	20	12	700	3000	36	GU5.3	51	46	20
41866 WFL	4050300428833	35	12	1100	3000	36	GU5.3	51	46	20
41871 WFL	4050300428857	50	12	1800	3000	36	GU5.3	51	46	20

DECOSTAR® ALU

The aluminum-coated reflector without a shield reduces the thermal load in the luminaire by around 60% compared with aluminum-coated reflectors with a shield and by about 80% compared with dichroic reflectors with a shield. The dimmable lamp with UV-reducing quartz (as per IEC 60432) offers a neutral light throughout the life of the lamp.

- Long average life of 3000 hours
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K

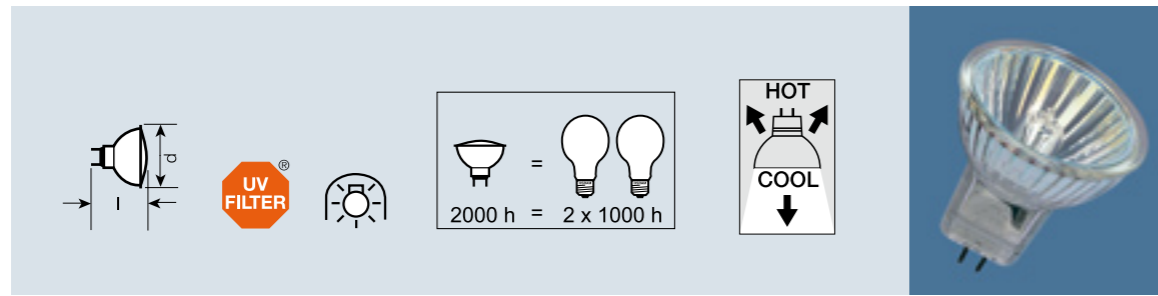


Product reference	Product number	W	V	cd	t[h]	°	mm	d max. [mm]	l max. [mm]	
DECOSTAR® 51 COOL BLUE®										
46871 WFL	4050300816661	50	12	1200	4000	36	GU5.3	51	46	20

DECOSTAR® COOL BLUE® is ideal for jewellers, art galleries and anyone who prefers cold light colors.

- Particularly cool light at 4500 K
- Long average life of 4000 hours
- Dichroic reflector reduces the heat in the light beam by up to 66%
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable

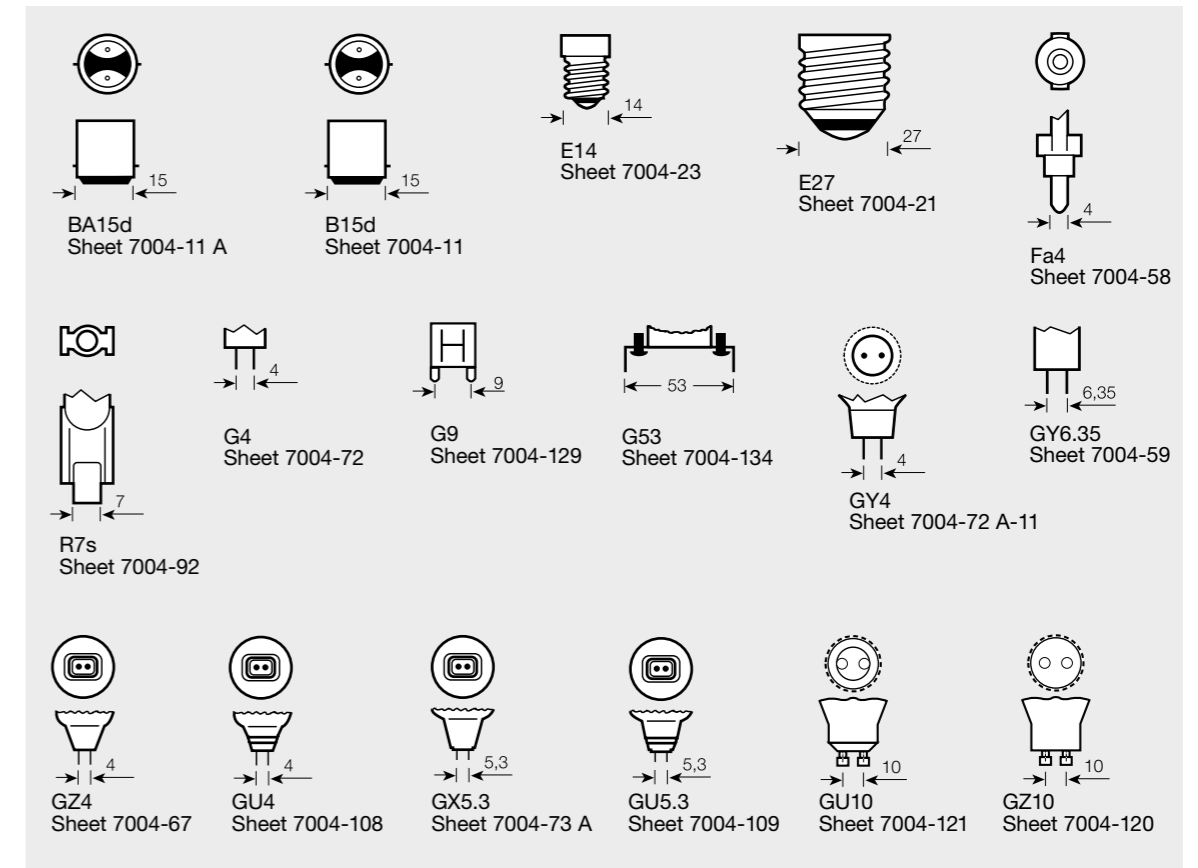
DECOSTAR® 35



Product reference	Product number	W	V	cd	t[h]	°		d max. [mm]	l max. [mm]	
DECOSTAR® 35										
44888 WFL	4050300443935	10	12	300	2000	36	GU4	35	40	10
44890 SP	4050300346090	20	12	3200	2000	10	GU4	35	40	10
44890 WFL	4050300346168	20	12	500	2000	36	GU4	35	40	10
44892 SP	4050300346182	35	12	5000	2000	10	GU4	35	40	10
44892 WFL	4050300346229	35	12	1000	2000	36	GU4	35	40	10

- Average life of 2000 hours
- Dichroic reflector reduces the heat in the light beam by up to 66%
- Approved for use in open luminaires to IEC 60598-1
- UV-FILTER
- Dimmable
- Color temperature of 3000 K

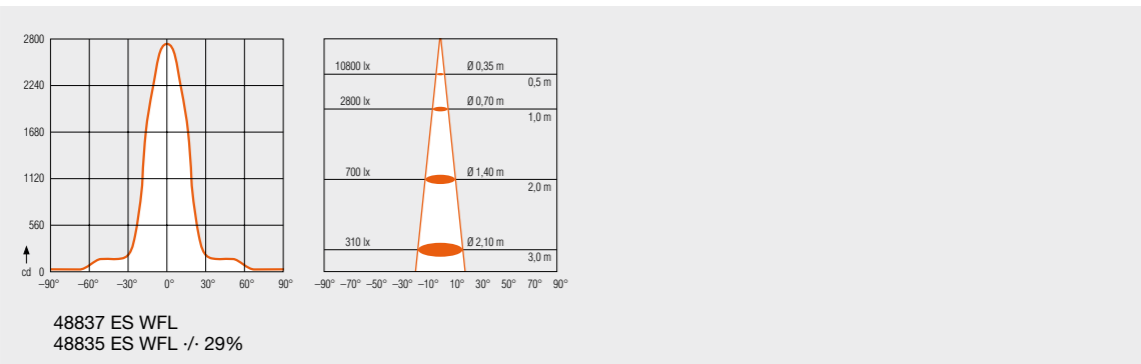
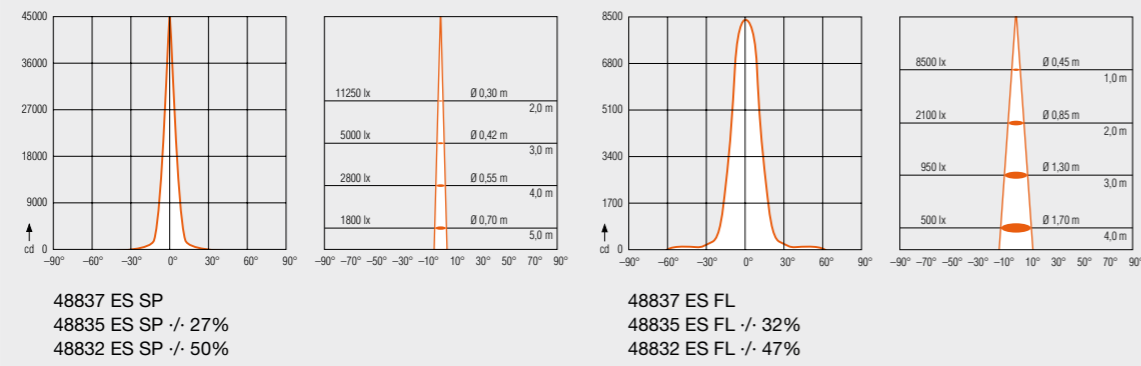
Bases IEC/EN 60061-1



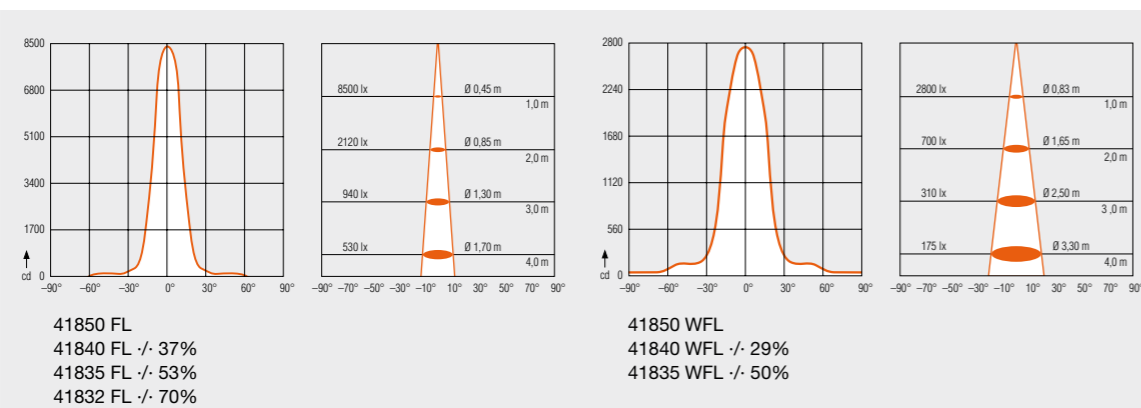
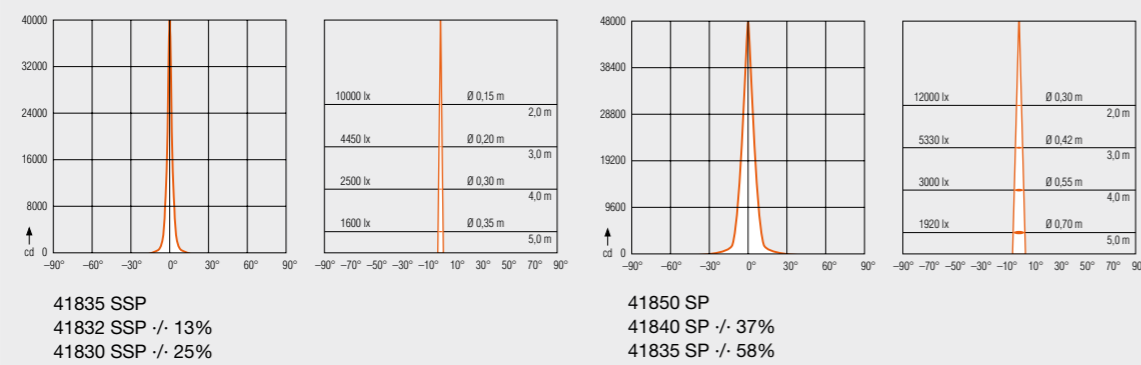
Note:
Operate halogen lamps for outdoor applications and damp locations only in luminaires approved for the purpose.

Tungsten-halogen lamps with reflectors | Luminous intensity distribution¹⁾

HALOSPOT® 111 ES



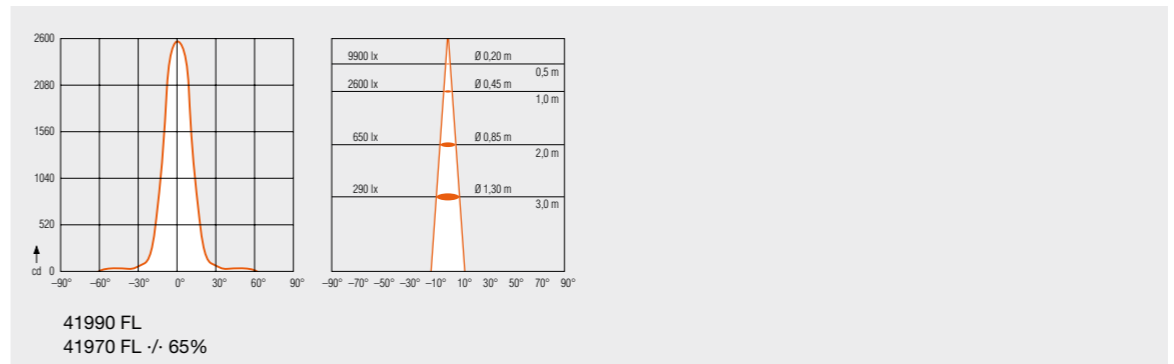
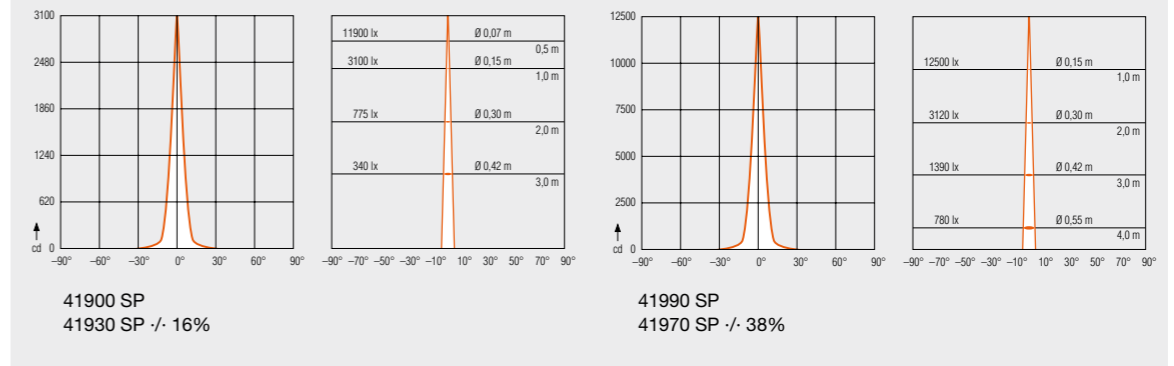
HALOSPOT® 111



— HWW = Half-peak angle

Tungsten-halogen lamps with reflectors | Luminous intensity distribution¹⁾

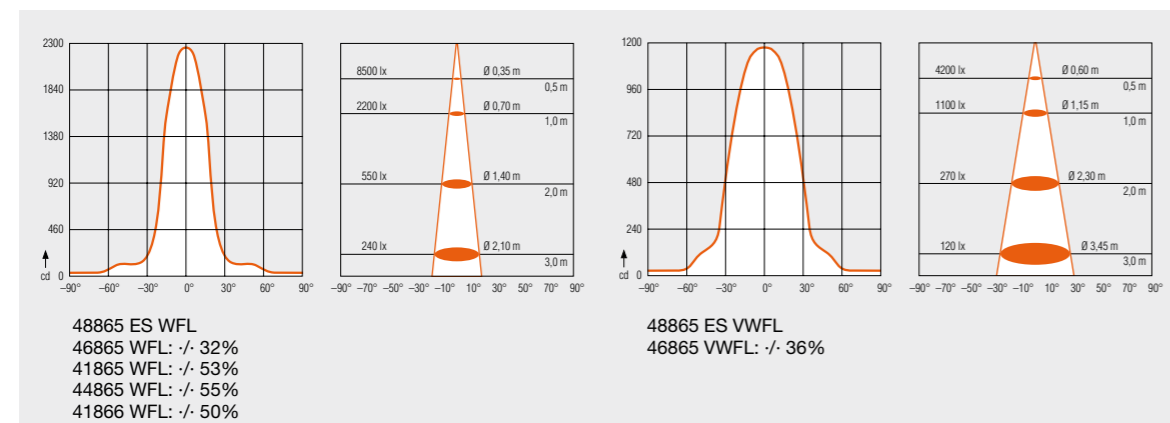
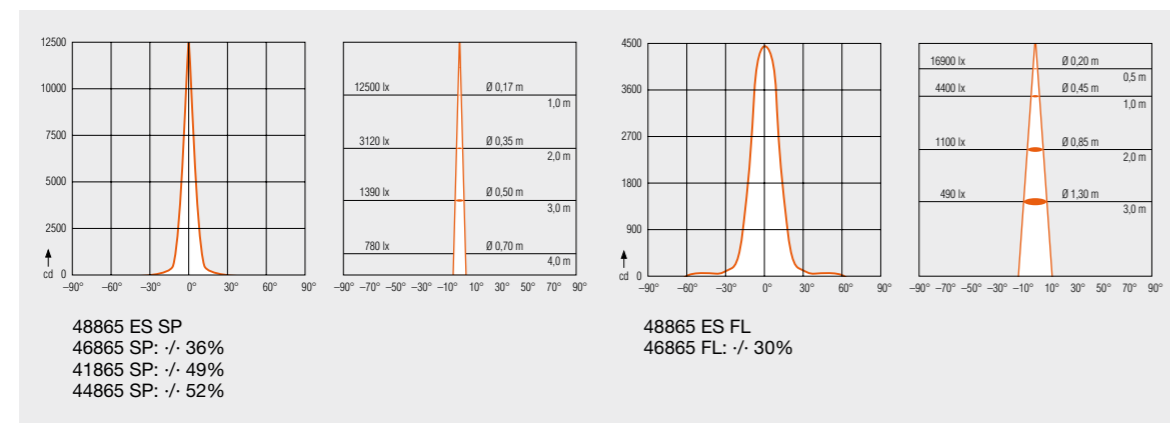
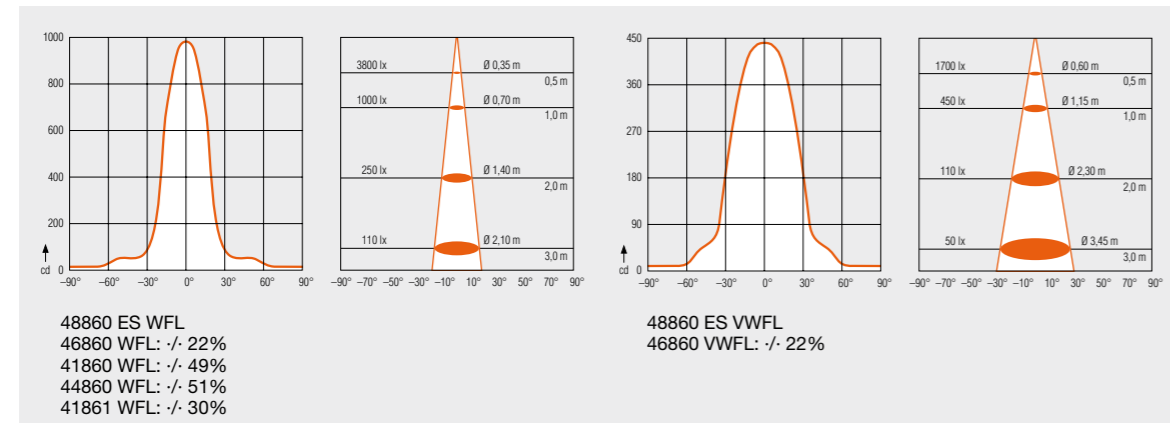
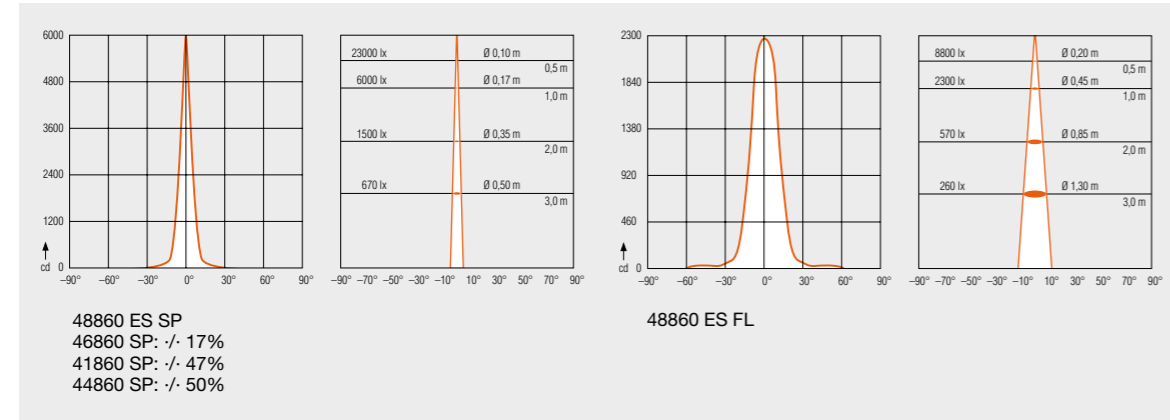
HALOSPOT® 48/70



— HWW = Half-peak angle

Tungsten-halogen lamps with reflectors | Luminous intensity distribution¹⁾

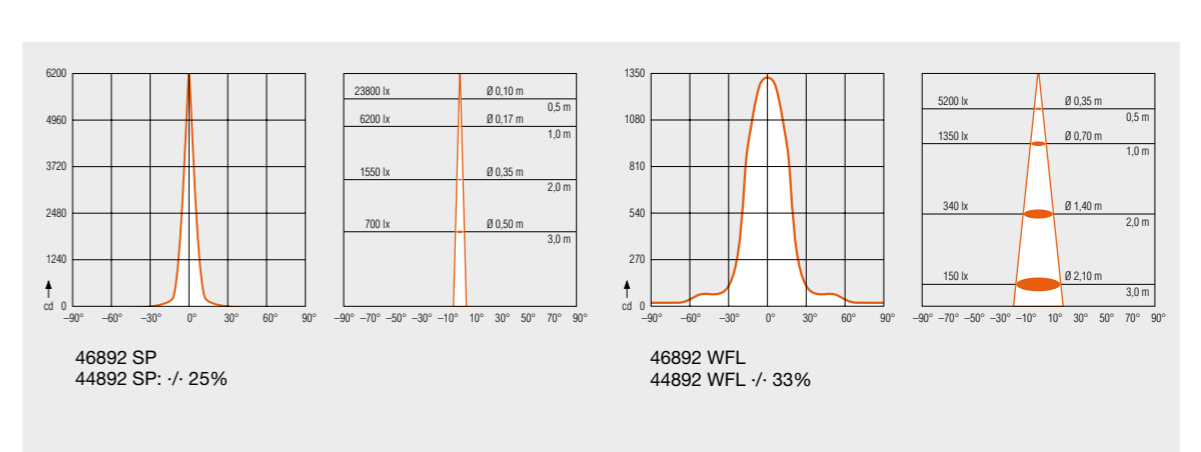
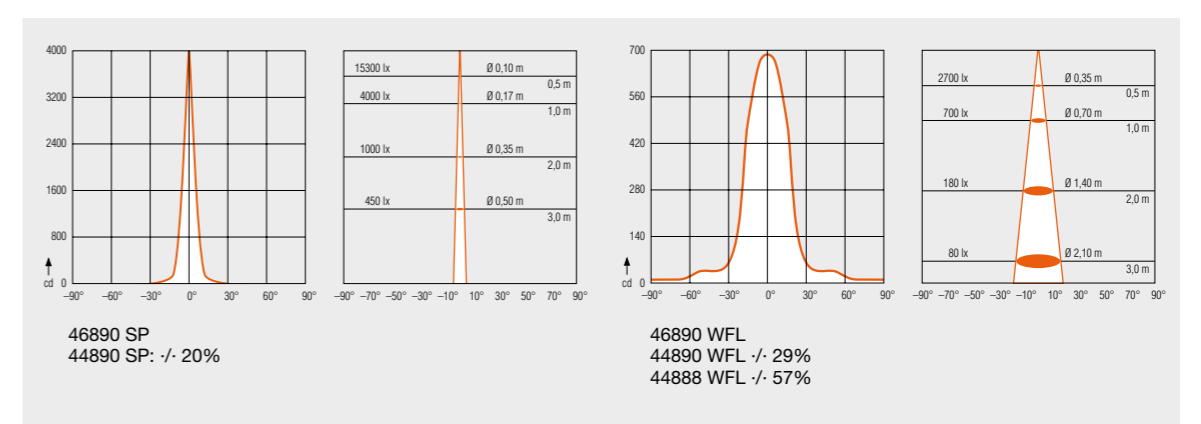
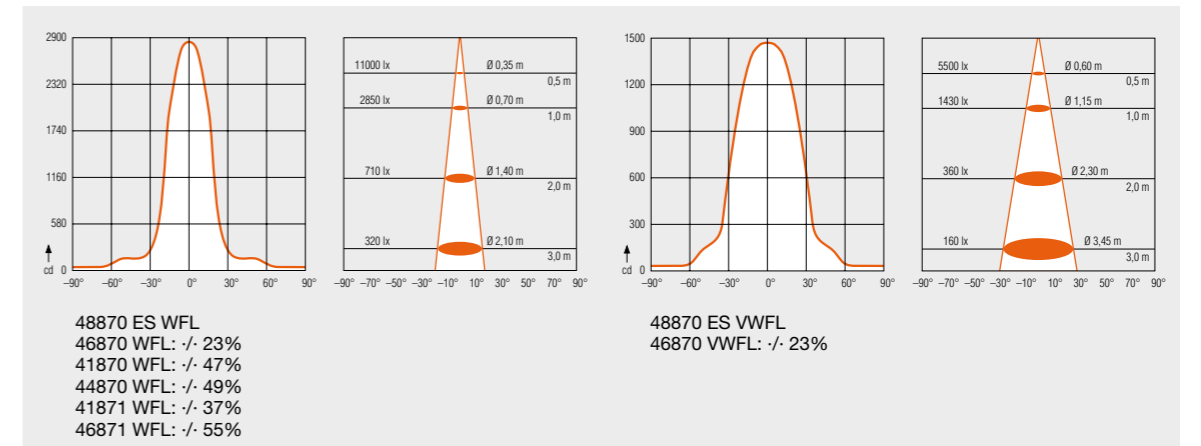
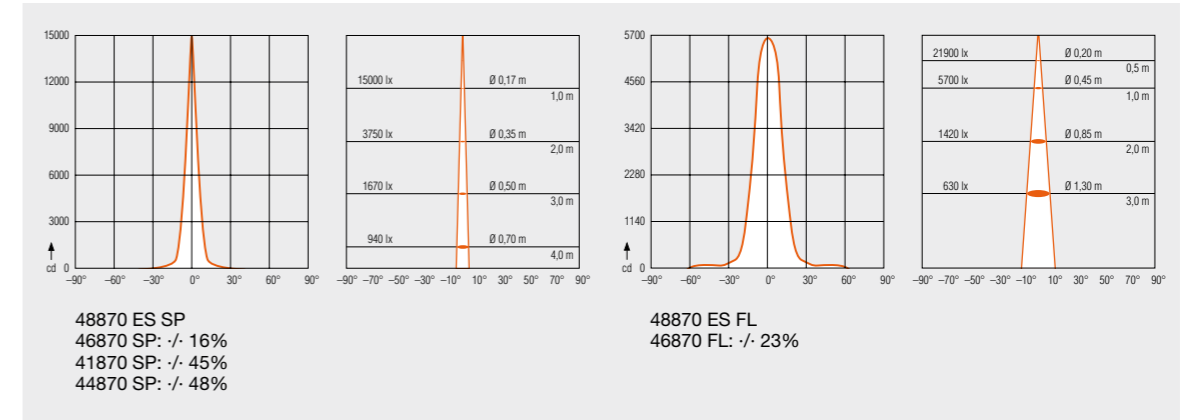
DECOSTAR®



— HWW = Half-peak angle

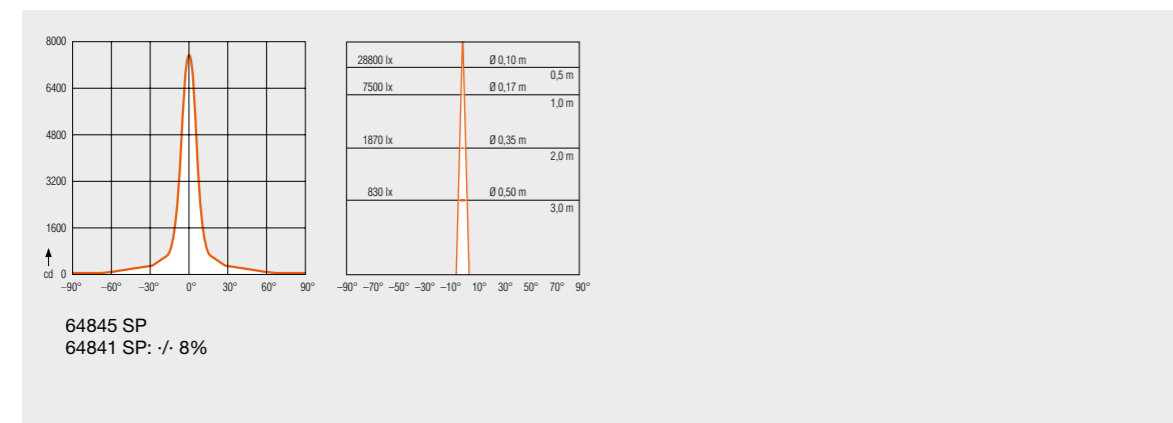
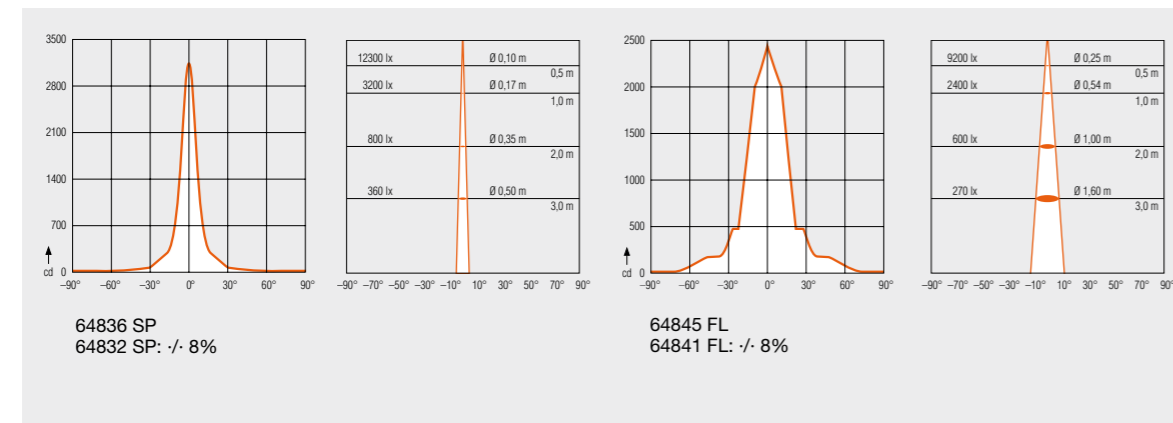
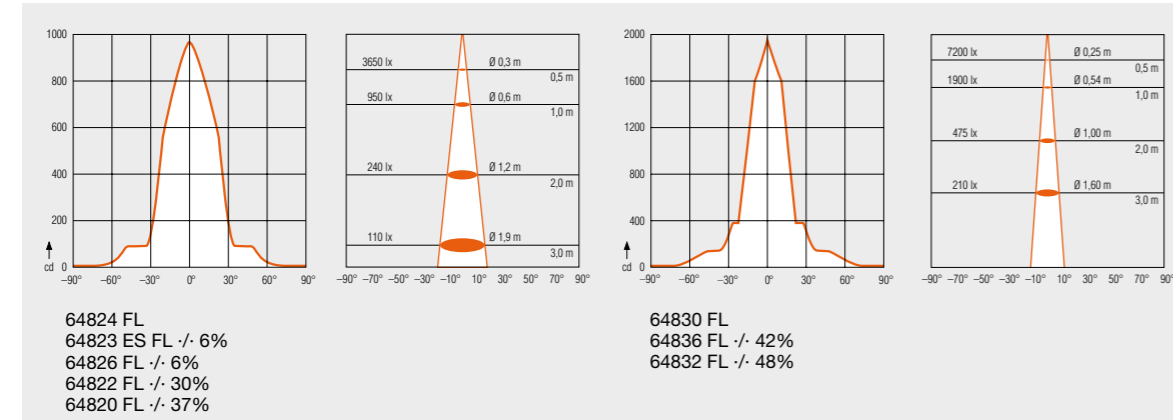
Tungsten-halogen lamps with reflectors | Luminous intensity distribution¹⁾

DECOSTAR®



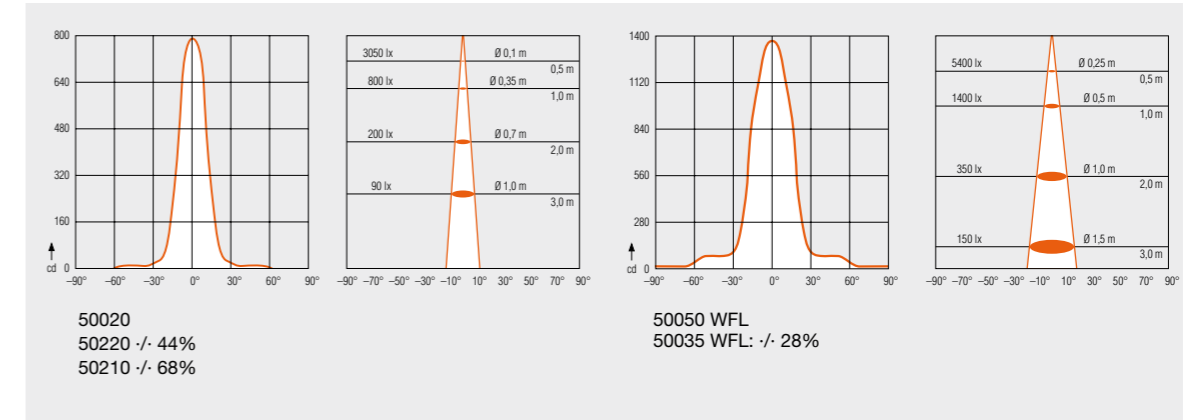
— HWW = Half-peak angle

Tungsten-halogen lamps with reflectors | Luminous intensity distribution¹⁾ OSRAM HALOPAR®

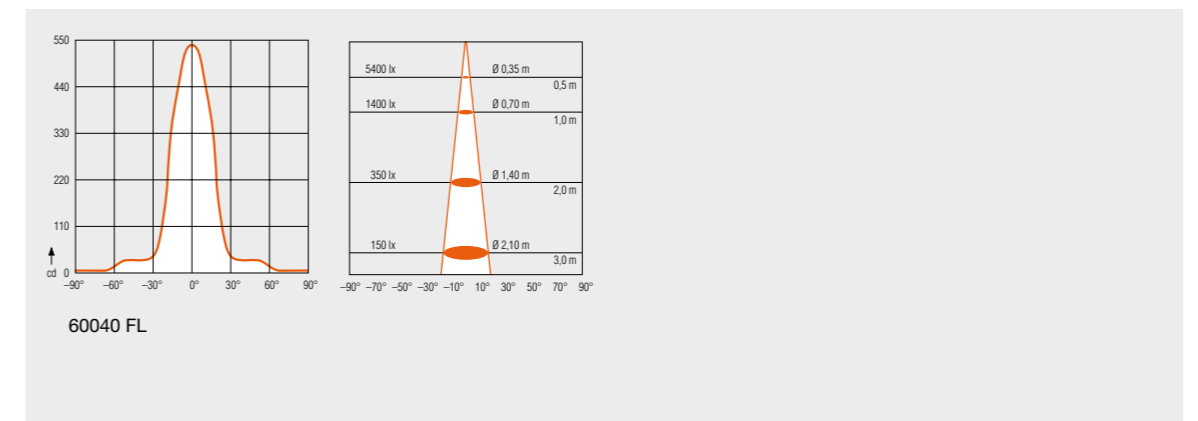


— HWW = Half-peak angle

Tungsten-halogen lamps with reflectors | Luminous intensity distribution¹⁾ MINISTAR®



DECOPIN™ with G9 base for mains voltage



— HWW = Half-peak angle