



# The reliable guiding stars.

Effective solutions for airfield lighting: Tungsten halogen lamps and the innovative IRC technology.

SEE THE WORLD IN A NEW LIGHT



# The right lamps for the right applications.

## Tungsten halogen technology.

**Reliability, longevity and reasonable maintenance costs account for the success of tungsten halogen lamps as light sources for demanding airfield lighting applications.**

Tungsten halogen lamps offer a number of features which make them more suitable for airfield lighting systems than any other lamp technology. They can be operated well below rated current with intensities down to 1/10,000 of full intensity and are thus the light source of choice in all visible conditions, day or night. Their small bulb dimensions and high luminance enable compact lights to be constructed with low protrusion above ground.

## Pre-focus technique.

**Simple replacement and easy adjustment reduce maintenance costs.**

Lamps with PK30d bases offer an unsurpassed precision of filament alignment and make adjustments unnecessary. Lamps with integrated reflectors are optical systems designed to be mounted at the reflector rim. They, too, allow for quick replacement without any additional adjustment. All in all, pre-focusing translates into the same light output after lamp replacement with no adjustment effort.

## Cable connection.

**Heat is the main enemy of any high-wattage lamp placed in an enclosed luminaire. This is particularly true for inset lights that are exposed to direct sunshine and surrounded by hot concrete.**

Cable connections allow electrical contacts to be placed away from the pinch seal. This reduces the risks of pinch seal overheating and molybdenum foil oxidation, which are the two main reasons for shortening the lamp life.

### Benefits:

- Wide range of available power: 30W–200W
- Long lifetime: more than 6,000 hours are possible
- Easy operation
- Reduced operation and maintenance costs
- Constant color temperature (3,000K)
- Instant and constant light output over the lamp life
- Robust design
- Dimmable operation
- Flicker-free operation
- Environmentally preferred: mercury-free
- Infrared radiation output that provides light in the worst of conditions (snow for example)

With these benefits, OSRAM tungsten halogen lamps provide state-of-the-art technology for airfield applications.





## **XENOPHOT® technology.**

Just a little more light can make all the difference.

Using xenon instead of krypton as the filling gas increases the luminous efficacy of a lamp – that's the basic idea behind our XENOPHOT® technology. Such lamps make it easier to comply with the international standards and recommended practices of aviation authorities. They generate more light output for the same power consumption than their krypton counterparts.

## **Cold beam reflector technology.**

Because of their small prisms, inset lights with very low projection above ground place very high demands on the directional precision of the light beam.

Halogen capsules must be meticulously adjusted in optimised parabolic reflectors for maximum effect. These ready-made pre-focused optical systems generate very narrow light beams of unsurpassed directional precision. Cold beam reflectors prevent heat from being concentrated on optical parts of luminaires such as filters, lenses or prisms. Reflector lamps are indispensable for independently switchable bidirectional lights and can therefore be thought of as the ideal light source for the airfield lighting of tomorrow.

## **IRC technology (Infrared Reflective Coating).**

Halogen lamps don't just produce light. 60% of the created radiation are infrared (IR) rays. The innovative IRC technology increases the efficiency of halogen lamps by reflecting a major part of the generated useless IR radiation back to the coil where it is converted into visible light. The infrared reflective coating at the outside of the capsule acts as an IR mirror but lets nearly 100% of visible light pass (see figure 2).

The result of this new technology is that the overall efficiency of the IRC lamp is improved by up to 30% when compared with standard halogen lamps. This gain in efficiency can be used to optimise the lamp in different ways:

- To produce more light output
- To reduce the lamp's power requirement
- To increase lamp life
- Or a combination of all of the benefits

OSRAM is offering a new lamp family with IRC technology as a replacement for existing lamps, with double or even triple lifetime (up to 3,000 hours).

# IRC airfield lamps.

## Ways to save on maintenance costs.

The overall replacement costs are high, and this has led to demands for longer lamp life. OSRAM offers a new series of lamps with significantly increased lifetime.

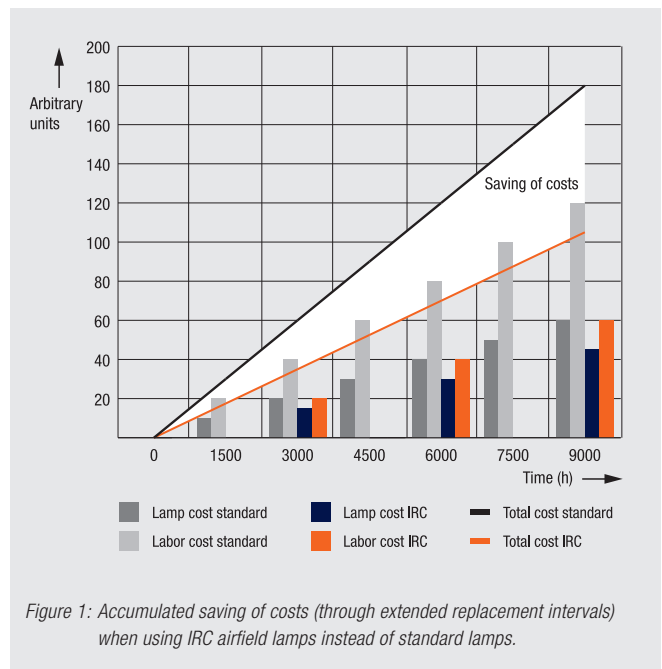
Example 1:  
Standard 48W, 6.6A reflector lamp (64337).  
Specified with a lifetime of 1,500 hours.

Example 2:  
Standard 45W, 6.6A, PK30d-based lamp (64317, 64319).  
Specified with a lifetime of 1,500 hours.

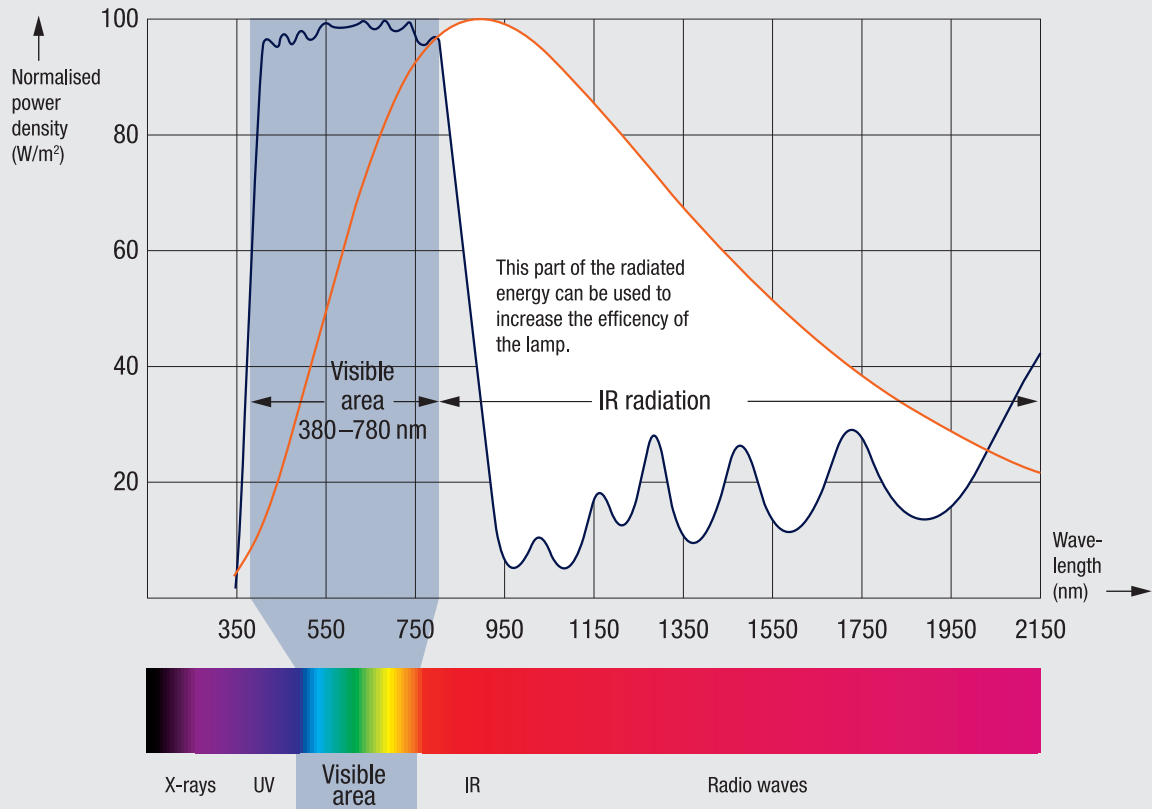
NEW – 48W, 6.6A reflector lamp (64337 IRC – Long Life) with a lifetime of 3,000 hours.

NEW – 45W, 6.6A, PK30d-based lamp (64317 IRC, 64319 IRC – Long Life) with a lifetime of 3,000 hours.

Substitute your standard lamps with new long life versions.

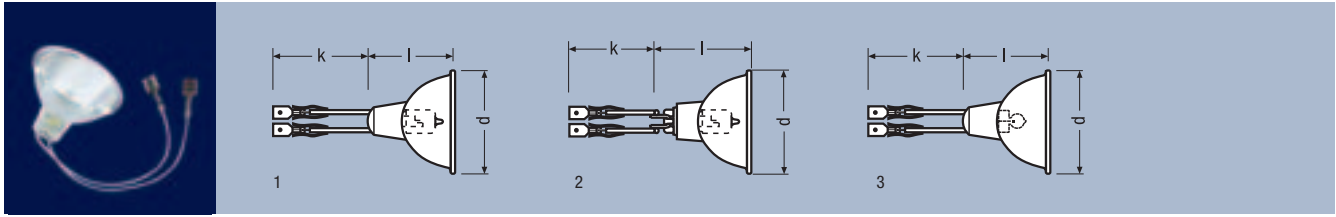


## How infrared reflective coating (IRC) emits.



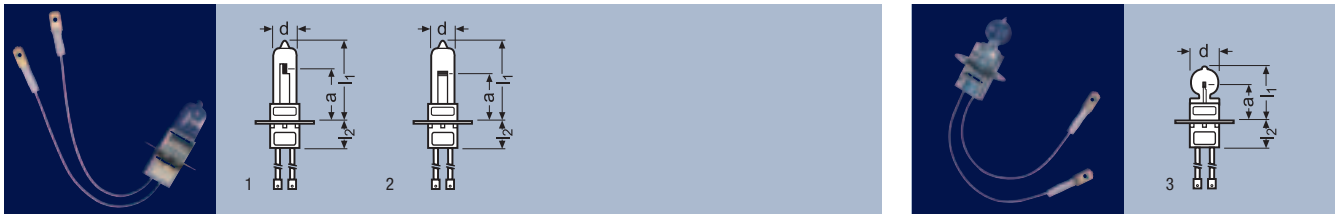
— Radiation of tungsten at a color temperature of 3,000 K.  
— Transmission curve of the infrared reflective coating. Transmitting ~100% in the visible area and reflecting in the infrared area.

## TUNGSTEN HALOGEN LAMPS FOR AIRFIELD LIGHTING



Product reference	Wattage (W)	Average life <sup>1)</sup> (h)	Axial luminous intensity <sup>2)</sup> (kcd)	Max. diameter d (mm)	Max. length l (mm)	Min. cable length k (mm)	Connector	Normal pack (pcs.)	Fig. No.
<b>Reflector lamps, for series operation at 6.6 Ampere (burning position: any)</b>									
64331 SP-A-30-10 <sup>3)</sup>	30	1000	min. 16	50.4	48	130	female	20	1
64331 FL-A 30-10 <sup>4)</sup>	30	1000	min. 3.7	50.4	48	130	female	20	1
64331 FL-AC 30-10 <sup>4)</sup>	30	1000	min. 3.7	50.4	48	130	female, male	20	1
64333 A 40-15	40	1500	min. 10	35.3	37	130	female	20	1
64333 B 40-15	40	1500	min. 10	35.3	37	130	female round	20	1
64333 C 40-15	40	1500	min. 10	35.3	37	130	male	20	1
64337 A 45-15	45	1500	min. 19	50.4	45	125	female	20	1
64337 B 45-15	45	1500	min. 19	50.4	45	125	female round	20	1
64337 A 48-15	48	1500	min. 20	50.4	45	125	female	20	1
64337 B 48-15	48	1500	min. 20	50.4	45	125	female round	20	1
64337 C 48-15	48	1500	min. 20	50.4	45	125	male	20	1
<b>64337 IRC-A 48-30</b>	48	<b>3000</b>	min. 20	50.4	45	125	female	20	3
<b>64337 IRC-C 48-30</b>	48	<b>3000</b>	min. 20	50.4	45	125	male	20	3
64338 AC 48-10	48	1000	min. 23	50.4	45	125	female, male	20	1
64336 A 62-15	62	1500	min. 28	50.4	45	125	female	20	1
64339 A 105-10	105	1000	min. 30	50.4	48	125	female	20	2
64339 AC 105-10	105	1000	min. 30	50.4	48	125	female, male	20	2
64339 B 105-10	105	1000	min. 30	50.4	48	125	female round	20	2
64339 C 105-10	105	1000	min. 30	50.4	48	125	male	20	2

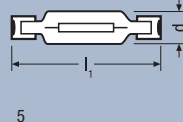
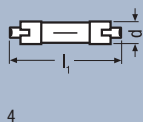
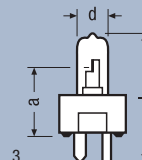
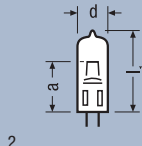
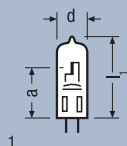
IRC



Product reference	LIF code	Wattage (W)	Average life <sup>1)</sup> (h)	Luminous flux (lm)	Connector	Filament	Filament dimensions w x h (mm)	a <sup>6)</sup> (mm)	Max. diameter d (mm)	Max. length l <sub>1</sub> (mm)	Max. length l <sub>2</sub> (mm)	Normal pack (pcs.)	Fig. No.
<b>Lamps with PK30d base, for series operation at 6.6 Ampere (burning position: s90 / vertical-to-horizontal, base down)</b>													
64317 C 45-15	J1/76	45	1500	800	male	C-8	1.4 x 3.4	16	13.5	max. 36	max. 20	100	1
<b>64317 IRC-C 45-30</b>	J1/76	45	<b>3000</b>	800	male	C-8	2.1 x 2.9	16	15	max. 28	max. 20	100	3
64318 A 45-15	J1/77	45	1500	800	female	C-8	1.4 x 3.4	16	13.5	max. 30	max. 20	100	1
64318 Z 45-15 <sup>5)</sup>	J1/77	45	1500	800	male	C-8	1.4 x 3.4	16	13.5	max. 30	max. 20	100	1
64319 A 45-15		45	1500	800	female	C-8	1.4 x 3.4	20	13.5	max. 34	max. 16	100	1
64319 Z 45-15 <sup>5)</sup>		45	1500	800	male	C-8	1.4 x 3.4	20	13.5	max. 34	max. 16	100	1
<b>64319 IRC-A 45-30</b>		45	<b>3000</b>	800	female	C-8	2.1 x 2.9	20	15	max. 32	max. 16	100	3
64328 HLX-A 65-15		65	1500	1450	female	Cbar-6	3.2 x 3.2	20	13.5	max. 32	max. 16	100	2
64328 HLX-Z 65-15 <sup>5)</sup>		65	1500	1450	male	Cbar-6	3.2 x 3.2	20	13.5	max. 32	max. 16	100	2
64341 HLX-A 100-15	J1/79	100	1500	2700	female	Cbar-6	5.3 x 3.0	20	13.5	max. 32	max. 16	100	2
64341 HLX-Z 100-15 <sup>5)</sup>	J1/79	100	1500	2700	male	Cbar-6	5.3 x 3.0	20	13.5	max. 32	max. 16	100	2
64342 HLX-C 100-15	J1/80	100	1500	2700	male	Cbar-6	5.3 x 3.0	20	13.5	max. 40	max. 16	100	2
64361 HLX-A 150-15	J1/83	150	1500	3600	female	Cbar-6	7.1 x 3.6	20	13.5	max. 34	max. 16	100	2
64361 HLX-Z 150-15 <sup>5)</sup>	J1/83	150	1500	3600	male	Cbar-6	7.1 x 3.6	20	13.5	max. 34	max. 16	100	2
64382 HLX-A 200-15	J1/84	200	1500	4800	female	CC-6	6.2 x 3.9	20	13.5	max. 36	max. 21	100	2
64382 HLX-C 200-15	J1/84	200	1500	4800	male	CC-6	6.2 x 3.9	20	13.5	max. 36	max. 21	100	2

IRC

IRC



Product reference	LIF/ANSI code	Current (A)	Wattage (W)	Base	Average life (h)	Luminous flux (lm)	Burning position	Filament	Filament dimensions w x h (mm)	Max. diameter d (mm)	Max. length l <sub>1</sub> (mm)	a (mm)	Normal pack (pcs.)	Fig. No.
<b>Single-ended lamps, for series operation</b>														
64322	EXL	6.6	30	GZ(GY)9.5	1500	430	s90	C-8	1.2 x 3.5	11.5	max. 44.5	25.4	12	3
64311	J1/59	6.0	36	G6.35	1500	600	s90	C-8	1.2 x 3.3	11.5	max. 47	33	40	1
64321	J1/57	6.6	45	G6.35	1500	900	s90	C-8	1.3 x 3.6	11.5	max. 47	33	40	1
64320	EXM	6.6	45	GZ9.5	1500	900	s90	C-8	1.4 x 3.3	11.5	max. 44.5	25.4	12	3
64346	J1/58	6.6	100	G6.35	1200	2300	s90 <sup>7)</sup>	Cbar-6	3.0 x 4.7	13.5	max. 47	33	40	2
64354	EWR	6.6	150	GZ(GY)9.5	1000	3700	s90	Cbar-6	4.4 x 5.5	13.5	max. 63.5	39.1	12	3
64386	J1/39	6.6	200	G6.35	1500	4700	s90 <sup>7)</sup>	Cbar-6	4.6 x 6.8	13.5	max. 47	33	40	2
58750	EZL	6.6	200	GZ(GY)9.5	1300	5200	s90	CC-6	5.5 x 3.8	13	65	39.1	12	3

Product reference	LIF code	Current (A)	Wattage (W)	Base	Average life (h)	Luminous flux (lm)	Burning position	Filament	Filament dimensions w x h (mm)	Max. diameter d (mm)	Max. length l <sub>1</sub> (mm)	Normal pack (pcs.)	Fig. No.
<b>Double-ended lamps, for series operation</b>													
64315	J1/78	6.6	45	R7S	1000	750	any	C-8	4 x 1.5	8.8	47.5	25	4
64340	J1/82	6.6	100	R7S	1000	2000	any	CC-8	6 x 2.6	12	60.2	25	5
64380	J1/40	6.6	200	R7S	1000	4400	any	CC-8	10 x 3	15	60.2	25	5

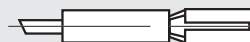
1. Reference	2. Product feature	3. Connector	4. Wattage	5. Lifetime
64331	FL (Flood)	A	30	10 = 1000 h
64333	SP (Spot)	B	40	15 = 1500 h
64337	IRC (IR-coated)	C	45	20 = 2000 h
64336	HLX (Xenon gas inside)	AC	48	30 = 3000 h
64338	CER (with Ceramic stone)		62	
64339			105	

For example:  
**64337 IRC-A 48-30** (64337 IRC lamp with connector A, female, 48W, 3000 h average life)

Label connectors are available in a flat or round design:



Connector A, female  
Complies with DIN 46247



Connector B, female round  
For contacts Ø 4 mm



Connector C, male flat  
Complies with DIN 46248

## OSRAM GmbH

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- 1) At 6.6A
- 2) At 0° direction and at 6.6 A
- 3) Spot adjustment
- 4) Flood adjustment
- 5) Male connector Z / C complies with DIN 46248
- 6) Reference plane for length "a" is the upper plane of the adjustment ring; this must be considered when designing optical systems
- 7) Despite transverse filament, can be inclined at any angle in 90° position

### General information

Sales and deliveries are subject to the OSRAM terms of supply and payment valid on the day the sales agreement is signed. Operating data and dimensions are subject to the usual slight tolerances. OSRAM reserves the right to make technical modifications without notice. All supplies subject to availability.