



The reliable guiding stars.

Effective solutions for airfield lighting: Tungsten halogen lamps and LED light sources.



SEE THE WORLD IN A NEW LIGHT



The right light source for the right application.

Tungsten halogen technology: perfected for airfield lighting.

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

OSRAM tungsten halogen lamps provide an instant and constant light output over a lifetime of up to 6,000 hours. They are dimmable and allow flicker-free operation. Moreover, their small bulb dimensions and high luminance enable compact designs of airfield lights.

OSRAM offers tungsten halogen lamps from 30 to 200W, either with or without reflector. Due to their IR radiation, they can be used even in extreme weather conditions such as snow.

Benefits of working with OSRAM

- OSRAM is a market leader – your experienced partner in the airfield segment
- OSRAM is a high-quality supplier with a global footprint
- Long-lasting products through intensive testing during development and production
- Investment protection: OSRAM is a reliable partner with sustainable solutions
- Application support for optics, electronics, thermal management etc.
- Comprehensive patent portfolio

LED light sources: energy efficiency meets airfield quality.

Designed for the complex needs of airfield use, the ZELION® LED light source family is thoroughly tested (e. g. FAA sinus test) to meet the strict standards for airfield lighting.

ZELION® LED light sources offer an energy-saving system design that is not only focused on the light source itself and that reaches a high optical efficiency thanks to OSRAM's extensive application support in optics, electronics, thermal management etc.

Our LED technology is based on a comprehensive patent portfolio that ranges from single components to complete solutions. Reliability testing during development and production ensures the high quality and long life of our products.



Tungsten halogen airfield lamps.

Pre-focus technology

Lamps with PK30d bases offer an unsurpassed precision of filament alignment and make adjustments unnecessary. Lamps with integrated reflectors are 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 and therefore reduces the maintenance costs.

XENOPHOT® technology

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 at 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 optimized 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.



IRC technology (Infrared Reflective Coating)

Halogen lamps don't just produce light. 60% of the created radiation is in the form of 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. This new technology results in a higher light output and/or in an increased lamp life.

OSRAM is offering a new lamp family with IRC technology as a replacement for existing lamps with double or even triple lifetime.



ZELION® LED light sources.

A soft landing for your energy and maintenance costs

Ever-increasing passenger and air cargo volumes force airports to optimize safety, energy efficiency as well as maintenance costs. The robust ZELION® LED light source family can meet all these demands: it reduces the energy consumption of airfield lighting, while greatly improving its average lifetime and reliability. As the average lifetime is at least three times longer than that of halogen lamps, the maintenance costs can also be reduced significantly. Furthermore, ZELION® LED systems are easily dimmable and make the previous use of color filters unnecessary as colored light is directly produced by the LEDs.



OSRAM airfield quality in every part

All parts of the ZELION® LED systems are designed and tested to operate in the most extreme conditions. They are capable of withstanding greatly fluctuating temperatures and vibrations and adhere to precisely defined color spectra and light distribution levels at the same time. ZELION® LED systems are therefore ideal for airfield lighting and can be used in numerous areas including various airfield operations such as the taxiway centerline, stop bar and clearance bar. As the color spectrum of the applied LEDs meets all global standards in force, ZELION® LED systems can be used all over the world without any restrictions.

Green technology

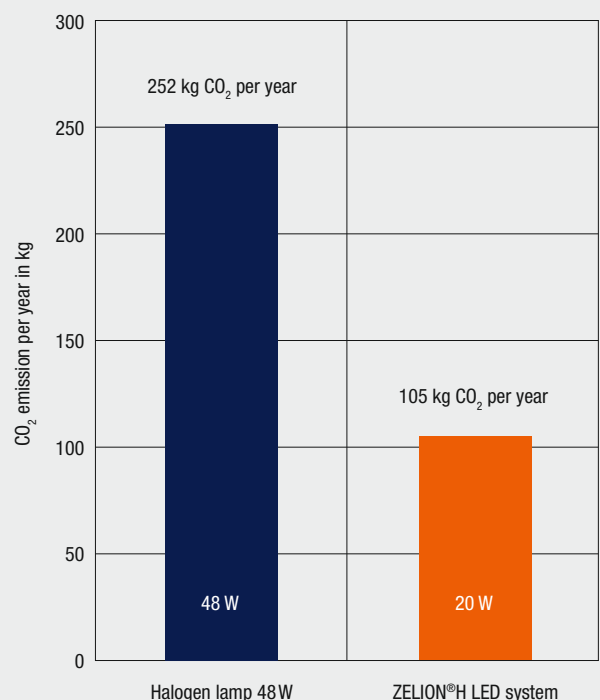
ZELION® LED light sources use high-power LEDs to achieve extremely high efficiency levels. The ZELION®H system, for example, generates over 1,800 cd per watt, which is more than four times that of standard lighting technologies. With ZELION® LED systems, you can combine efficiency gains with long-life solid-state technology. What's more, you also contribute to a cleaner environment as the energy-efficient systems also produce less CO₂ emissions than halogen lamps.

The following benefits make ZELION® an eco-friendly solution:

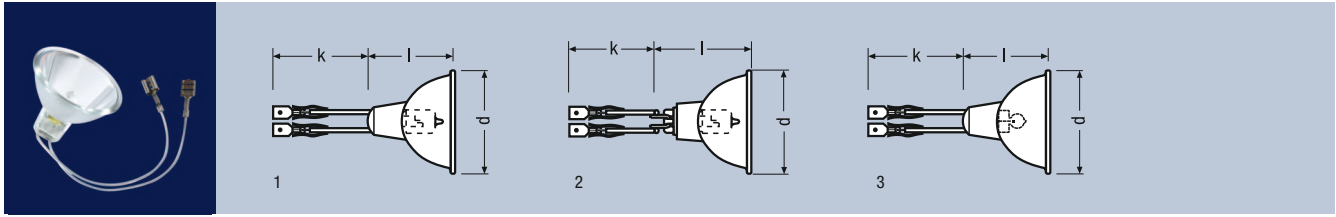
- Lower energy consumption
- Less CO₂ emissions
- Long lifetime, fewer replacements



Global Care represents OSRAM's commitment to environmental and social responsibility

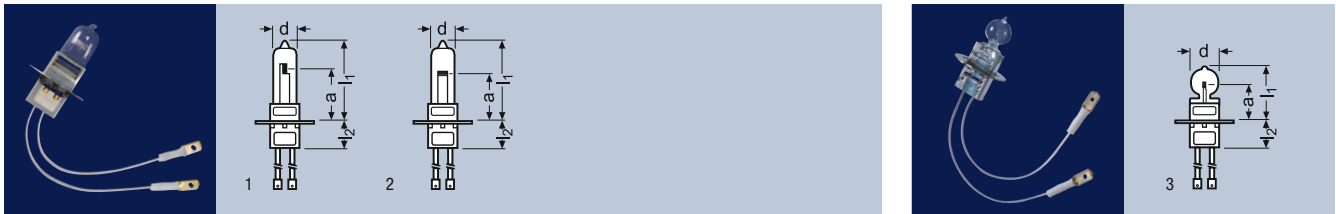


TUNGSTEN HALOGEN LAMPS FOR AIRFIELD LIGHTING



| Product reference | Wattage (W) | Average life ¹⁾ (h) | Axial luminous intensity ²⁾ (kcd) | Max. diameter d (mm) | Max. length l (mm) | Min. cable length k (mm) | Connector | Normal pack (pcs.) | Fig. No. |
|--|-------------|--------------------------------|--|----------------------|--------------------|--------------------------|--------------|--------------------|----------|
| Reflector lamps, for series operation at 6.6 Ampere (burning position: any) | | | | | | | | | |
| 64331 SP-A-30-10 ³⁾ | 30 | 1000 | min. 16 | 50.4 | 48 | 130 | female | 20 | 1 |
| 64331 FL-A 30-10 ⁴⁾ | 30 | 1000 | min. 3.7 | 50.4 | 48 | 130 | female | 20 | 1 |
| 64331 FL-AC 30-10 ⁴⁾ | 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 |
| 64337 IRC-A 48-30 | 48 | 3000 | min. 20 | 50.4 | 45 | 125 | female | 20 | 3 |
| 64337 IRC-C 48-30 | 48 | 3000 | 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

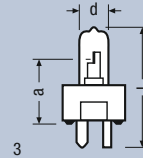
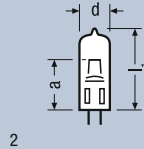
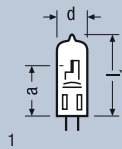


| Product reference | LIF code | Wattage (W) | Average life ¹⁾ (h) | Luminous flux (lm) | Connector | Filament | Filament dimensions w x h (mm) | a ⁶⁾ (mm) | Max. diameter d (mm) | Max. length l ₁ (mm) | Max. length l ₂ (mm) | Normal pack (pcs.) | Fig. No. |
|--|----------|-------------|--------------------------------|--------------------|-----------|----------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

IRC

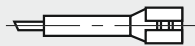
IRC

TUNGSTEN HALOGEN LAMPS AND LED LIGHT SOURCES

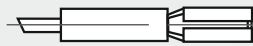


| Product reference | LIF/ANSI code | Current (A) | Wattage (W) | Base | Average life (h) | Luminous flux (lm) | Burning position | Filament | Filament dimensions w x h (mm) | Max. diameter d (mm) | Max. length l ₁ (mm) | a (mm) | Normal pack (pcs.) | Fig. No. | |
|---|---------------|-------------|-------------|-----------|------------------|--------------------|-------------------|----------|--------------------------------|----------------------|---------------------------------|--------|--------------------|----------|--|
| Single-ended lamps, for series operation | | | | | | | | | | | | | | | |
| 64322 | EXL | 6.6 | 30 | GZ(GY)9.5 | 1500 | 430 | s90 | C-8 | 1.2 x 3.5 | 11.5 | 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 | 47 | 33 | 40 | 1 | |
| 64321 | J1/57 | 6.6 | 45 | G6.35 | 1500 | 900 | s90 | C-8 | 1.3 x 3.6 | 11.5 | 47 | 33 | 40 | 1 | |
| 64320 | EXM | 6.6 | 45 | GZ9.5 | 1500 | 900 | s90 | C-8 | 1.4 x 3.3 | 11.5 | 44.5 | 25.4 | 12 | 3 | |
| 64346 | J1/58 | 6.6 | 100 | G6.35 | 1200 | 2300 | s90 ⁷⁾ | Cbar-6 | 3.0 x 4.7 | 13.5 | 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 | 63.5 | 39.1 | 12 | 3 | |
| 64386 | J1/39 | 6.6 | 200 | G6.35 | 1500 | 4700 | s90 ⁷⁾ | Cbar-6 | 4.6 x 6.8 | 13.5 | 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 | |

Label connectors are available in a flat or round design:



Connector A, female
Complies with DIN 46247



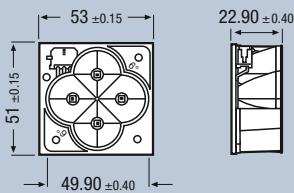
Connector B, female round
For contacts Ø 4 mm



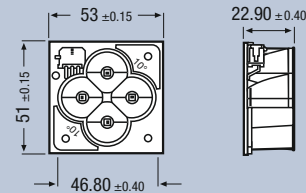
Connector C, male flat
Complies with DIN 46248



6° reflector



10° reflector



| Product reference | LED color | Wattage (W) | Average life ⁸⁾ (h) | Axial luminous intensity ⁹⁾ (kcd) | Beam angle | Color temp. (K) | Peak wavelength (nm) | Nominal current (A) | Nominal voltage (V) | Length (mm) | Height (mm) | Width (mm) |
|----------------------------|-------------|-------------|--------------------------------|--|------------|-----------------|----------------------|---------------------|---------------------|-------------|-------------|------------|
| LED light sources | | | | | | | | | | | | |
| ZELIONH/A/4/UW6x00/20W/6d | ultra white | 19.6 | 25000 | ~35 | 6° | ~6000 | — | 1.4 | 14 | 53 | 22.9 | 51 |
| ZELIONH/A/4/A616/14W/6d | amber | 14 | 25000 | ~19 | 6° | — | 616 | 1.4 | 10 | 53 | 22.9 | 51 |
| ZELIONH/A/4/B466/20W/6d | blue | 19.6 | 25000 | ~7 | 6° | — | 466 | 1.4 | 14 | 53 | 22.9 | 51 |
| ZELIONH/A/4/TG528/20W/6d | green | 19.6 | 25000 | ~30 | 6° | — | 528 | 1.4 | 14 | 53 | 22.9 | 51 |
| ZELIONH/A/4/UW6x00/20W/10d | ultra white | 19.6 | 25000 | ~20 | 10° | ~6000 | — | 1.4 | 14 | 53 | 22.9 | 51 |
| ZELIONH/A/4/A616/14W/10d | amber | 14 | 25000 | ~10 | 10° | — | 616 | 1.4 | 10 | 53 | 22.9 | 51 |
| ZELIONH/A/4/B466/20W/10d | blue | 19.6 | 25000 | ~3.5 | 10° | — | 466 | 1.4 | 14 | 53 | 22.9 | 51 |
| ZELIONH/A/4/TG528/20W/10d | green | 19.6 | 25000 | ~16 | 10° | — | 528 | 1.4 | 14 | 53 | 22.9 | 51 |

OSRAM GmbH

Display/Optic Division

Nonnendammallee 44
13625 Berlin
E-mail: displayoptic@osram.com

- At 6.6A
- At 0° direction and at 6.6A
- Spot adjustment
- Flood adjustment
- Male connector Z / C complies with DIN 46248
- Reference plane for length "a" is the upper plane of the adjustment ring; this must be considered when designing optical systems
- Despite transverse filament, can be inclined at any angle in 90° position
- Up to 3 years of continuous use, depending on thermal environment
- Simulation and prototyping measurement results

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 are subject to availability.

