



Creativity and technical know-how hand in hand. Since June 2004 Xenarc® automotive headlamps have been playing a leading role in a unique light display in Munich's Petuelpark (Germany). They are intended to symbolize the lights in the Petueltunnel below, a tunnel that made the park possible in the first place. Foto: Florian Holzherr

XENARC® – naturally!

Highlights nature – even in the city.



SEE THE WORLD IN A NEW LIGHT



Green light for XENARC®!



OSRAM XENARC® D3 and D4 HID light sources introduce an innovative range of environmentally friendly, mercury-free products that still offer all the advantages of OSRAM's existing XENARC® lamps.

XENARC® lamps are in the family of discharge lamps and as a defining characteristic emit their light through an electrical discharge in the shape of an arc. Conventional halogen lamps in contrast shed light from a wire filament. The XENARC® technology consists of the light arc between two electrodes in a microenvironment of xenon gas and metal halide salts hermetically sealed in a tiny quartz capsule. The arc tube is encased in a glass jacket to filter out the ultraviolet rays that is then integrated into one of two base versions both with or without integrated igniter. The D3 S/R versions with integrated igniter create the perfect combination for a complete system solution including harness and electronic control gear. Like all XENARC® systems, an electronic ballast and harness is required to start and maintain the electrical discharge. Green light go!

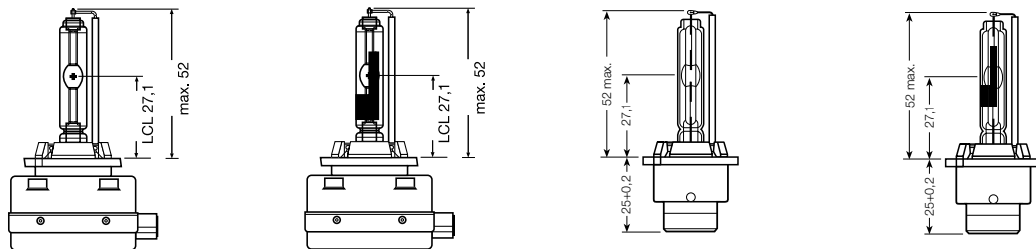
The advantages at a glance

- Environmentally friendly: mercury free**
 The light source contains no mercury, compared to standard automotive HID light sources that contain 0.55 mg.
- More light, less wattage**
 HID is a more efficient system than halogen alternatives. 71 lumens per watt (D3S or D4S) compared to 18 lumens per watt for a comparable halogen light source. This not only means more light, but also less power draw.
- Extended lifetime**
 There is an appreciable improvement in product lifetime, $B_3 = 1500$ hours, $T_c = 2500$ hours, which is two to three times the life of halogen equivalents.
- Enhanced natural illumination**
 HID light looks more like natural daylight than halogen sources. Color temperature is 4200°K vs. 3200°K for halogen.
- Approved automotive specifications**
 XENARC® D4S has obtained international ECE R99 approval and FMVSS approval is in process. Other variations are being developed.

Red light for mercury! XENARC® D3 and D4

Comparison of mercury-free HID and traditional HID light sources

- D3 and D4 light output and color are comparable to mercury-containing D1 and D2 types.
- Chemistry and geometry had to be changed to accommodate the removal of mercury, resulting in different arc bending and arc diffusion characteristics.
- Mercury-free types will not be interchangeable with mercury-containing types.
- Base coding will be unique to each light source type to prevent interchangeability.
- D3 and D4 light sources have different electrical properties from D1 and D2 types; therefore, mercury-free types will require different ballasts from mercury-containing types.



Product name	D3S	D3R	D4S	D4R
Product reference	66340	66350	66440	66450
Application	Projection headlight systems	Reflector headlight systems	Projection headlight systems	Reflector headlight systems
Light source wattage	35 +/- 2W	35 +/- 2W	35 +/- 2W	35 +/- 2W
Lamp voltage	42 +/- 9V	42 +/- 9V	42 +/- 9V	42 +/- 9V
Luminous flux	3050 lm +/- 450 lm	2650 lm +/- 450 lm	3050 lm +/- 450 lm	2650 lm +/- 450 lm
Lamp lifetime	$B_3 = 1500$ h $T_c = 2500$ h	$B_3 = 1500$ h $T_c = 2500$ h	$B_3 = 1500$ h $T_c = 2500$ h	$B_3 = 1500$ h $T_c = 2500$ h
Color temperature	4200 K	4100 K	4200 K	4100 K
Base	PK32d-5	PK32d-6	P32d-5	P32d-6

Detailed technical documentation is available from OSRAM.

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