

# D1S / D1R XENARC™ *electronic* High Intensity Discharge Lighting

**OSRAM, a world leader in lighting technology,** is a pioneer in the development of High Intensity Discharge (HID) Light Sources. OSRAM is committed to Total Quality in research and development, manufacturing, and customer service.

OSRAM's HID plants are ISO9001 and QS9000 certified.

Unlike halogen incandescent lamps, the OSRAM XENARC™ *electronic* lamp does not have a filament. Instead, it creates light from an electrical discharge between two electrodes in a micro-environment of xenon gas, mercury, and metal halide salts that are hermetically sealed in a tiny quartz capsule. The arc tube is encased in a glass jacket to filter ultraviolet rays. The light is emitted by an electrically energized gas -- a plasma discharge -- formed and sustained between two electrodes. The HID system includes an electronic ballast that controls the arc ignition process and sustains the arc in normal operation. Instead of being a part of the ballast unit, in the XENARC™ *electronic* lamp, the igniter is part of the lamp base.

## HID Light Source Options

- **XENARC™ *electronic* D1R:** Blacktop masking for reflector systems
- **XENARC™ *electronic* D1S:** For projection headlamps with light shield
- Filtered and shielded versions for different EMI control solutions

## D1 compared to D2

- The D1 incorporates the HID ignition circuitry into the base of the lamp.
- Optimized high voltage igniter, protected from access within the lamp base.
- Proven D2 burner technology with unchanged optical properties.
- Elimination of expensive high voltage connectors.
- Compatible with existing D2S/R headlamp optics.
- Reduction of voltage conducted through the wiring harness by a factor of 25.



Shielded  
D1S

## HID Features / Benefits

- **Increased Light Output**  
At least 70% more light at a lower wattage than traditional lamps. Higher Efficiency System than halogen alternatives. 91 lumens per watt (D1S) compared to 18 lumens per watt for comparable halogen light source.
- **Life**  
B<sub>3</sub> = 1500 hours  
T<sub>c</sub> = 3000 hours

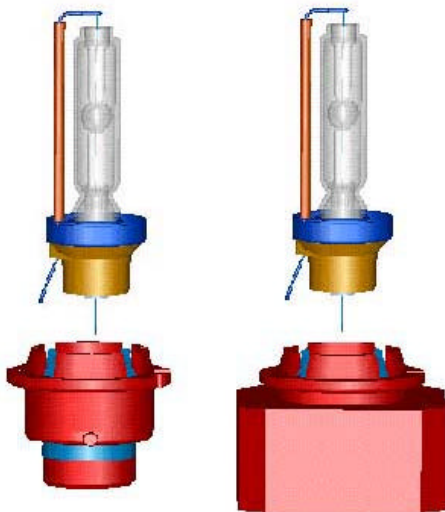
- **Lower Wattage**  
Less power draw for more light. XENARC™ *electronic* produces 3200 lumens (D1S) from 42 watts (Light Source plus ballast), compared to 1000 lumens for a comparable 55w 9006 halogen Light Source.
- **Durability**  
Lack of coil in light source provides increased durability and resistance to shock and vibration.
- **Illumination**  
Whiter and crisper blue-white light is safer because it is closer to natural daylight compared to light from halogen sources. Color temperature is ~4200° K compared to ~3200°K for halogen.
- **UV Protection**  
Outer jacket prevents transmission of harmful UV emissions. Plastic lenses can be used in conjunction with the Luminarc system.
- **Replacement**  
Light Source and ballast can be replaced separately.



Filtered  
D1S

D1S / D1R XENARC™ *electronic*

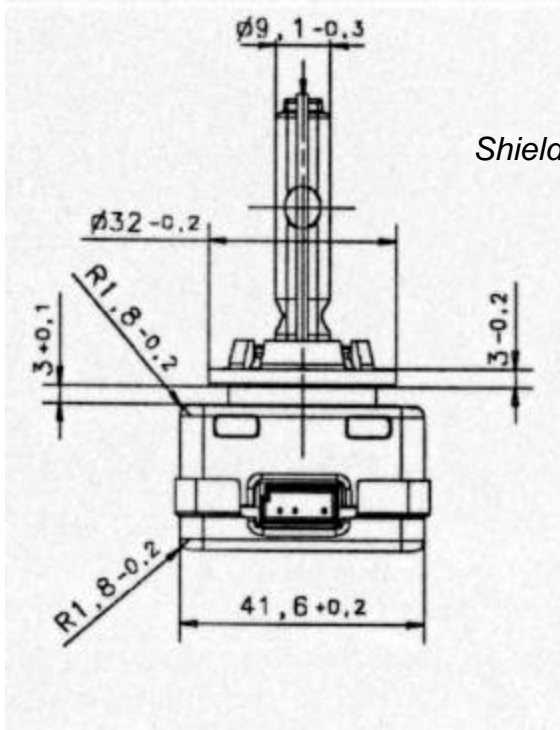
# Product Offering



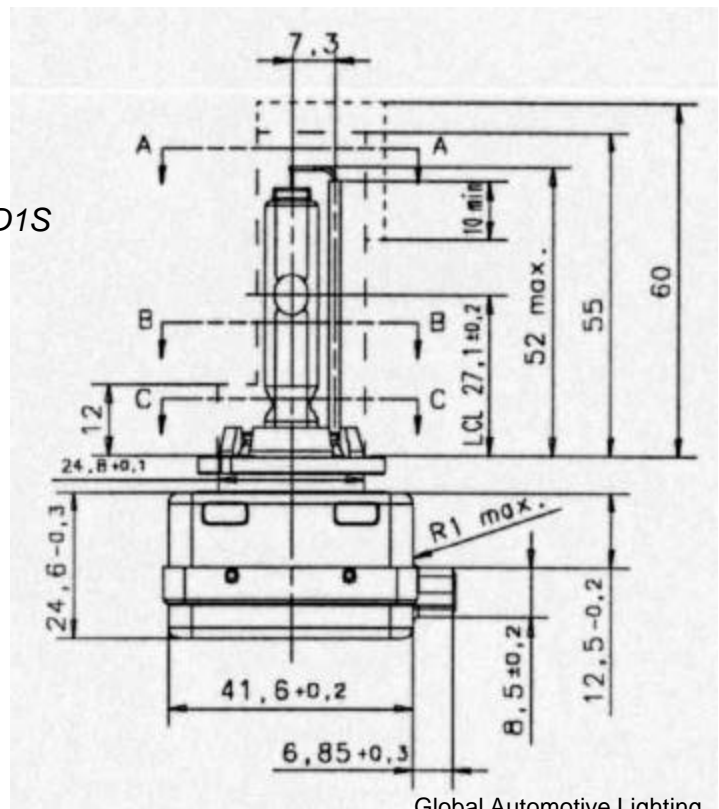
*D2S with standard base*

*D1S with integrated igniter base*

PARAMETER	XENARC™ <i>electronic D1S</i>	XENARC™ <i>electronic D1R</i>
Application	For projection systems with light shield	Blacktop masking for reflector systems
Light Source Power	35 +/-3W	35 +/-3W
Voltage	85 +/-17V	85 +/-17V
Average Luminance (cd/cm <sup>2</sup> )	6500	6500
Luminous Flux after 60 seconds	3200lm +/-450lm	2800 lm +/- 450lm
Lamp life	B <sub>3</sub> = 1500 hrs. T <sub>c</sub> = 3000 hrs.	B <sub>3</sub> = 1500 hrs. T <sub>c</sub> = 3000 hrs.
Color Temperature	4250° K	4150° K
Distance between electrodes	4.2+/- .045 mm	4.2+/- .045 mm
Light Center Length (LCL)	27.1+/-0.15mm	27.1+/-0.15mm
Max. socket temperature	210 °C	210 °C
Burning position	horizontal +/- 10°	horizontal +/- 10°



*Shielded D1S*



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