

Bright, reliable and economical

XENARC® gas discharge lamps for vehicle-mounted spotlights and searchlights



With the development of XENARC® gas discharge lamps, OSRAM brought about a revolution in vehicle lamp technology. The principle of producing light from an arc is very different from the conventional approach of passing electricity through a filament and offers a number of important advantages, and not only for road traffic. Outstanding performance, total reliability and excellent economy make spotlights and searchlights fitted with XENARC® lamps a sensible alternative to halogen lamps in off-road applications. Even in the harshest conditions, rugged XENARC® lamps bring the safety of light to the darkness of night.

OSRAM

XENARC® – a bright choice for anyone who has to turn night into day



XENARC® GDL



So many people have to work in twilight or night-time conditions – construction site workers, farmers and forestry workers, police, fire-fighters, ambulance crews and coast-guards, to name but a few. They all need a convincing and reliable substitute for natural daylight, either mounted on

vehicles or as hand-held work-lights. The perfect light source for these demanding jobs comes from OSRAM and is called XENARC® GDL.



A lighting system that pierces the night

Using headlights fitted with XENARC® lamps to illuminate the work area it is possible to achieve a much better distribution of illuminance than with halogen lamps. XENARC® GDL lamps also offer much better luminous efficacy.

One XENARC® GDL lamp provides the same luminous flux as two halogen lamps. What this means is that XENARC® lamps cast more light more evenly over a wider area.

Work longer under less strain

The colour temperature of the light generated by a XENARC® GDL lamp is very close to that of natural daylight, which means there is less strain on the eyes than with halogen light so people can work for longer periods. Particularly in harsh outdoor

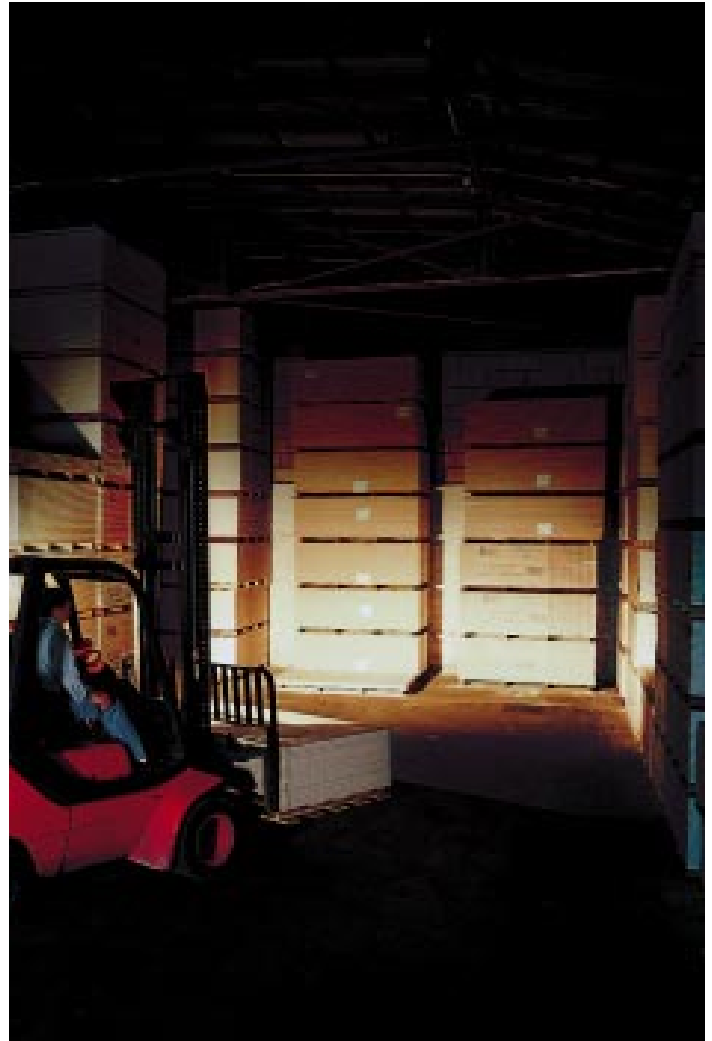
conditions, this natural perception of colours contributes greatly to safety at work.

XENARC® GDL – a night worker that earns its keep



XENARC® System

A direct comparison shows clearly that a XENARC® GDL spotlight shines much more light ahead than a conventional halogen spotlight.



Halogen headlights

Not easily disturbed

XENARC® GDL lamps are also much tougher than halogen lamps. In contrast to halogen lamps, XENARC® GDL lamps operate on the principle of an arc of light generated by gas discharge. They produce light without a filament, which is the part of a halogen lamp that is most likely to break down. This enables the XENARC® GDL to withstand

vibrations at least five times more severe. And if indeed the arc does break down, there is no need to replace the lamp; it will just need restarting. Your light will be back in only a few seconds. The fact that the control gear is physically separate from the lamp itself means that XENARC® systems are far more reliable. This arrangement makes them ideal for

mounting on vehicles and offers excellent protection against outside influences such as operating temperatures or sudden voltage drops.

XENARC® systems offer maximum possible safety for people working underground. It is reassuring to know that even in severe conditions the lamp will perform reliably and reduce machine down-times to an absolute minimum.

Faithful service

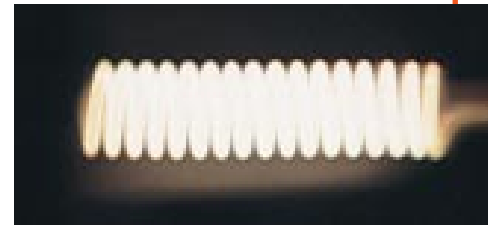
Even if operating conditions are not extreme, XENARC® GDL lamps still put halogen lamps in the shade. Depending on the switching cycle and design of the electronic control gear, their service life is up to six times longer. Whereas halogen lamps have to be replaced after around 500 hours of operation, XENARC® GDL lamps will regularly provide daylight-quality light for upwards of 3,000 hours.

Outstanding performance

A XENARC® GDL lamp provides high-quality light over a wide area, yet it has extremely modest power requirements. At only 35 W its wattage is just half that of an H3 24V lamp. What's more, it can be operated on 12V batteries in addition to 24V batteries.



XENARC® GDL: a vibration-proof arc of ionised gas.



Halogen lamp: light is generated by a white hot tungsten filament.



XENARC® GDL is ideal for all applications that call for mobility, bright light and rugged design.

XENARC® – safety that pays

H3 24V

Conventional halogen lamp with **filament**.

With a luminous efficacy of **24 lm/W**, the H3 24V lamp generates a luminous flux of **1,700 lm**.

The halogen lamp offers a colour temperature of **approx. 3,200 K**.

The filament is relatively **sensitive to vibration**.

Halogen lamps have to be replaced after **about 500 hours of operation**.

With a rating of **70 W**, the power consumption of the H3 24V is 50% higher than that of the XENARC® GDL.

24V supply required.



Principal function



Luminous flux



Colour temperature



Vibration strength



Lamp life



Power consumption



Rated voltage



XENARC® GDL

Gas discharge with **arc**.

With a luminous efficacy of **91 lm/W**, a single XENARC® GDL lamp provides a luminous flux of **3,200 lm**.

At **over 4,250 K**, the colour temperature of the XENARC® lamp is very close to that of daylight. There is less strain on the eyes.

5 times more tolerant of vibrations thanks to a robust arc of light. Separate control gear for additional reliability.

6 times longer service life. Lamps need replacing only after **3,000 hours of operation***.

At only **35 W**, the XENARC® GDL is good at saving energy.

Choice of **24V or 12V supply**.

*depending on the switching cycle and design of the electronic control gear

Cheaper in the long run
A XENARC® GDL lamp cannot be used in a spotlight or searchlight without electronic control gear, and the price per lamp is certainly higher than for halogen lamps. However, a comparative cost analysis shows that this is an investment which pays dividends in the long run.

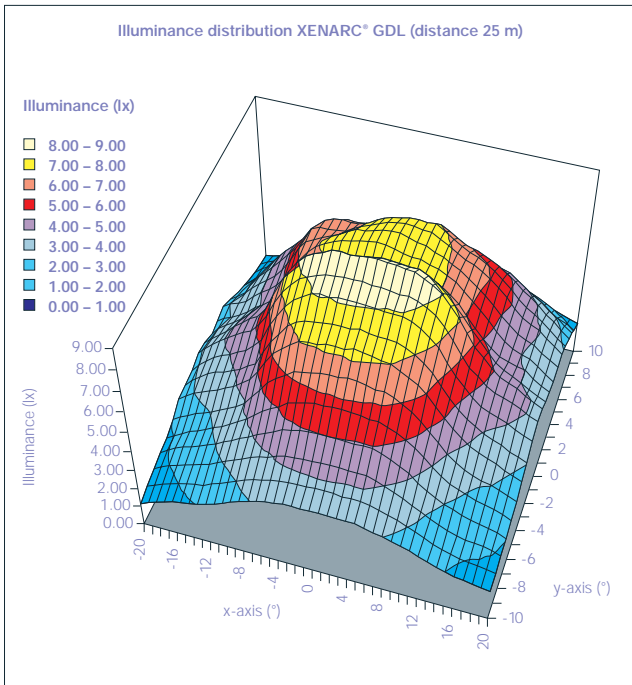
Because the XENARC® GDL lamp has such a high luminous flux, one of these lamps can replace two H3 lamps. XENARC® GDL lamps also last six times longer, so two of these lamps would be equivalent to twelve H3 24V lamps. And if we add in average relamping costs and the difference in

power consumption, the XENARC® GDL lamp emerges as the clear winner.

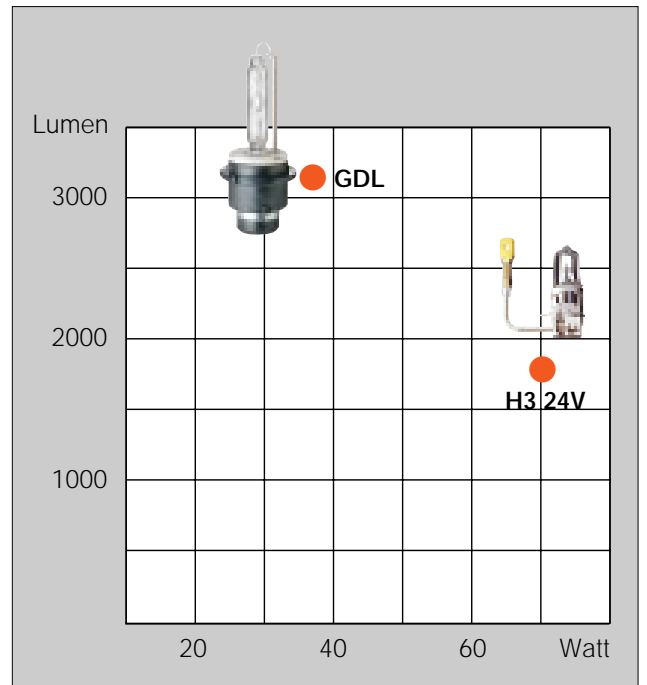
What price a life?

In actual practice, the decision to purchase XENARC® GDL lamps is even more clear-cut. When it's a question of life and death on an urgent rescue mission, why risk putting

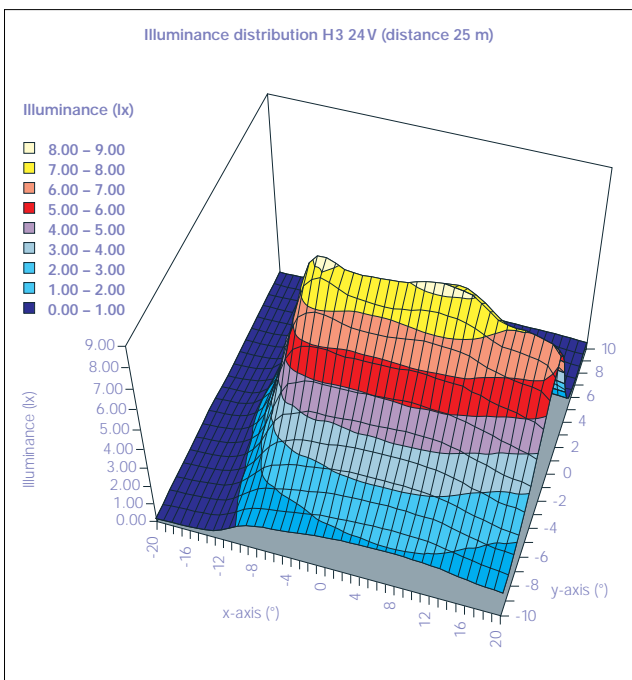
machinery out of action because of lamps that are susceptible to failure?



Compared with halogen lamps, XENARC® gas discharge lamps illuminate larger areas with a much higher illuminance and only 50% of the power consumption of an H3 24V lamp.



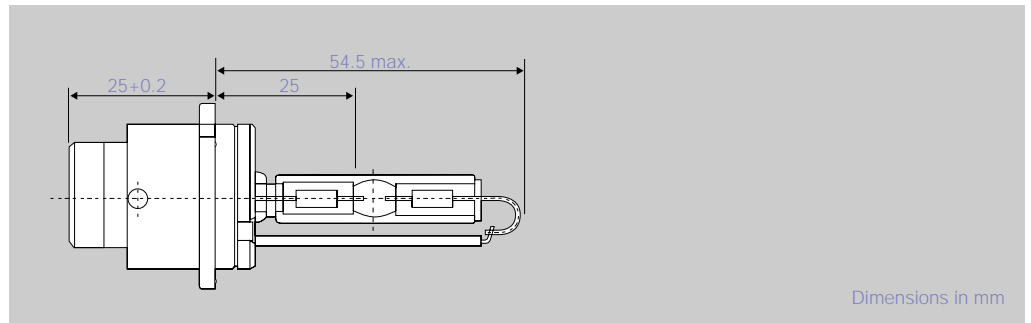
At 91 lm/W, the luminous efficacy of the XENARC® GDL lamp is more than three times that of an H3 24V halogen lamp.



A complete gas discharge system consists of a spotlight, gas discharge lamp and electronic control gear. The spotlight and electronic control gear are designed as separate units for greater mobility.

Technical data

For further information on XENARC® lamps please contact:
OSRAM Automotive
Hellabrunner Straße 1
D-81543 Munich



XENARC®	GDL
Lamp reference	66045
Lamp wattage	35 W ± 3 W
Lamp voltage	85V ± 20%
Luminous flux	3,200 lm
Colour temperature	4,250 K
Average lamp life	At least 3,000 h*
Base	P32d-2

*depending on the switching cycle and design of the electronic control gear

