

THORN



Oracle S

A compact eco-friendly road lantern



Oracle S



High optical efficiency and fitness of purpose remain essential attributes of good road lantern design



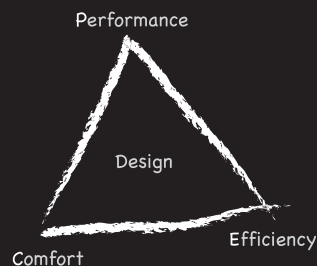
But in today's world – with our responsibility to future generations – we need to give greater recognition to environmental factors – and recognise that the need to select the right sustainable approach is as important as the need to change habits.

What influences the way we choose now?

- New habits, new standards, new solutions
- Rapid evolution, not revolution. A host of continuous improvements are being made, driven by new materials and new designs
- Integration of state-of-the-art lamp, gear and remote control/monitoring systems

Oracle S is a completely new aluminium road lantern with monitoring and dimming capability. Its design has been influenced by the existing Oracle range and by a recognition and appreciation of the need to provide communities with sustainable and energy saving lighting in a smooth and controlled manner. The result is a product that is long lasting, compact in design, versatile and economical in use.

With HST, HIT or CPO-TW lamps up to 150W, Oracle S can provide lighting to satisfy the highest requirements of minor road and urban street projects.



Performance: Providing the best visual effectiveness

Efficiency: Conserving energy and effort, reducing CO₂ emissions and waste, providing lighting that is practical and efficient to install, operate and maintain

Comfort: giving people satisfaction and stimulation

At Thorn we recognise our sustainability responsibilities, and with the **PEC** programme we have introduced a wide-ranging philosophy that underpins our approach to lighting design and implementation. The programme is based on the principle that performance, efficiency and comfort determine the visual effectiveness of lighting.

These key attributes are demonstrated throughout this brochure.

Integration of Oracle S into the urban environment

The daytime effects of road lighting are influenced by the form and colour of the lantern, its size, style and position.

Oracle S's pure, sleek shape blends harmoniously with traditional and modern urban landscapes. Fixings and bowl latches are as inconspicuous as possible and control points can be integrated into the design to reduce visual impact. The self-cleaning outline ensures longevity of service without the drawback of complex structures.

As befits its timeless design, Oracle S mixes with the majority of Thorn column packages. The use of compact, powerful lanterns, such as Oracle S, enables dedicated brackets to be shortened, or dispensed with altogether, and columns to be

spaced further apart. As an aid to visualising the appearance of a particular column, bracket and lantern combination, our City visualisation software is available to download on: www.thornlighting.co.uk/road_lighting.

As well as 'design by day – light by night', another consideration is eco-design, which has the entire life cycle in mind.

Oracle S has been designed using eco-design principles to assure it meets performance requirements while reducing its environmental impact over its life cycle.

Finally, the tight optical control ensures light is delivered where the designer intended, and as per CIE Technical Report 150, without waste and obtrusion.



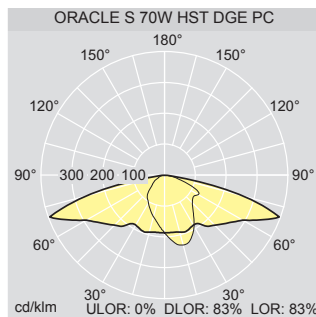
Best in class lighting performance

The optical secret of Oracle S is the design of a new generation of reflector.

When combined with a choice of enclosures (flat or shallow for sharp or medium cut-offs respectively) and optimised lampholder adjustments (15 sets), matches the light distribution to the geometry of the road. The reflector optimises light output and control for both E27/E40 and PGZ12 lamps up to 150W. The benefits are an LOR of 83% and ULOR of 0%, so the road is lit, not the sky!

Glass enclosures provide extra translucency whilst polycarbonate is more durable for use in residential areas.

Where a more restricted distribution of light is required a front or back cut-off shield is available. Being internal this accessory is normally factory fitted, but it can be retro-fitted on site. (see picture 1.)



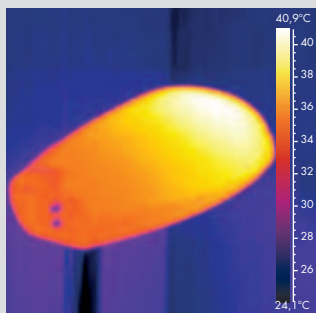
1. Oracle S with integral front and back louvers

Reliable Operation

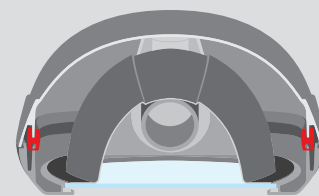
Prolonged, reliable service is expected of road lanterns which are often infrequently maintained even where environmental conditions are severe.

Oracle S is designed with optic and gear protection in mind bringing benefits to the user in terms of reliable operation and extension of the maintenance cycle. The lantern features a double rated IP66, for the optic and the gear, gasketed with ethylene-propylene rubber (EPDM), which is more weatherproof, has abrasion resistant properties and is better for the environment than silicon, also featuring a breathing system that controls pressure. Careful consideration was given to thermal management issues otherwise the heat generated in operation could adversely affect performance.

The luminaire has been designed using clips and screws instead of glue, ensuring easy dismantling for recycling.



Oracle S 100W measured at 35°C outdoor

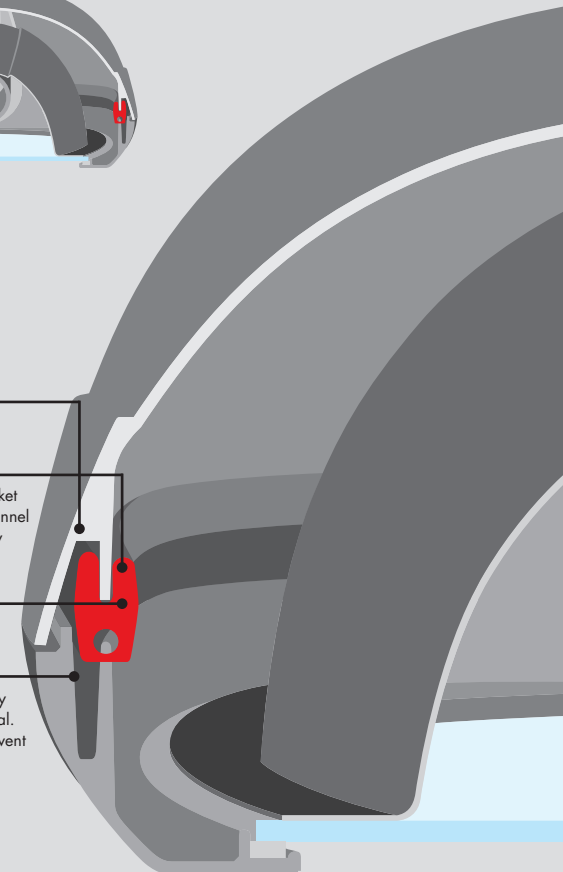


Die-cast canopy with ribbed labyrinth

1 piece cavity EPDM gasket with large compression tunnel for performance longevity

Deep 'U' shaped gasket adheres to body

Die-cast body and canopy with stepped labyrinth seal. Interlocking 'grooves' prevent ingress of moisture/dust.





Contractor friendly

The specification of Oracle S includes features designed to simplify installation and minimise maintenance requirements, thus saving users time, improving the standard of the final work and maximising safety of both the installing electrician and ultimately the road user.

These include:

- Lightweight, easy to carry body. Oracle S's curved lines offer as little resistance to wind as possible so that columns do not have to be oversized
- An integral rotating spigot, which allows post top and side entry, provides quick and safe mounting without the need for additional attachments
- Quick release front-clip for fast and efficient access to the lamp/gear compartment with no need to remove the lampholder or gear
- Despite its compact size and ability to take up to 150W lamps of high output, its internal space is optimised by clever layout and positioning of components. Access is intuitive and instantly understandable (1)

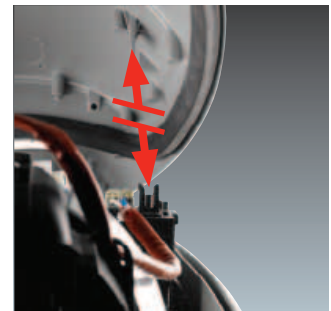
- Tool-less socket connections wherever possible
- If necessary during maintenance i.e. for raising and lowering applications the gear can be screw fixed onto the body

Maintenance

- An automatic cut-off device isolates the lantern from the power source when the canopy is opened (2)
- Full IP66 seal. This ensures that the lamp, reflector, enclosure and components are protected against the ingress of dust and moisture, which retains performance, prolongs operation and minimises maintenance and cleaning
- The control gear is released one handed without the aid of tools (3)(4)
- The lamp settings are not disturbed when the lamp or gear is removed, so original performance is maintained (5)(6)



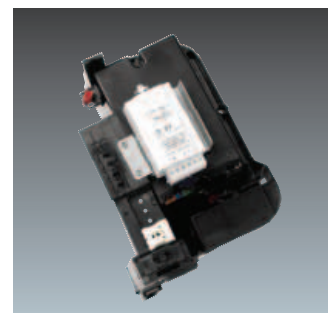
1.



2.



3.



4.



5.



6.

Oracle family

Oracle S is part of a comprehensive family, providing a consistent appearance across a range of different sizes and lamp ratings.

With wattages ranging from 35-400W, Oracle lanterns are equally capable of providing glare free visual clarity for a motorway driver, or promoting feelings of reassurance and safety along a residential street.



Oracle 2 – large, powerful, lanterns for high speed roads and motorways

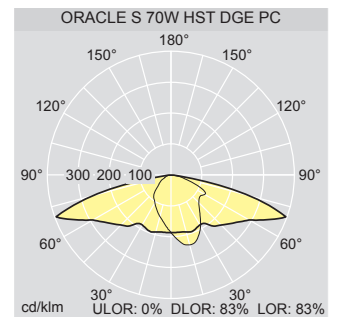
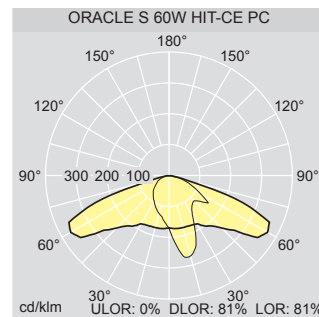


Oracle 1 – mid-size lanterns for major and interconnection roads



Oracle S – the compact offer for minor roads and urban streets

Product features



Lamps

- ☛ 50-150W HST (ST) high pressure sodium. Cap: E27/40
- ☛ 35-150W HIT-CE (MT) metal halide. Cap: E27/40
- ☛ 45-140W HIT-CE (MT) cosmowhite. Cap: PGZ12

Materials/Finish

Body: die-cast aluminium, powder coated grey
 Spigot: die cast aluminium, powder coated Akzo texturised 150 light grey
 Enclosures: UV stabilised polycarbonate or toughened glass, self-cleaning treatment on glass available on request
 Reflector: high purity anodised aluminium
 Screws and clips: stainless steel

Installation/Mounting

Integral tool free rotating spigot secured by 2 screws with safety bolts
 Post-top mounting: Ø60/76mm x 80mm long spigot. Tilted to 5°
 Lateral mounting: CL1-Ø34/42/49/60mm x 120mm. Tilted to 0°
 Cable gland for Ø8 to 13mm cable

Access from above to gear and optic system after quick release of the stainless steel front clip. Delivered ready to install, complete with factory fitted integral gear tray, all supplied in a single carton (without lamp).

Gears and Controls

⊕ Class I electrical
 Magnetic and Electronic ballasts
 Fix or Stepdim stand-alone
 Nema socket as standard or minicell on request
 Telega compatible, PowerLine or Radio Frequency

Standards

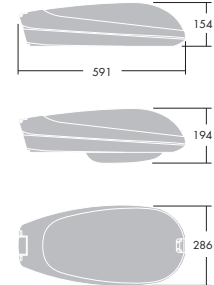
Designed and manufactured to comply with EN 60598-2-3; EN 13-201
 Ta -20/+35°C
 Weights and maximum windage: <9.3kg and <0.061m²
 IK08 (glass)
 IK10 (polycarbonate)
 ⚡ IP66 Optic ⚡ IP66 Gear
 ⚡ CE

Ordering Guides

Lamps to be ordered separately

Gear type	Elec. Class	Voltage	Description	Ilcos Code	Socket	Enclosure			Enclosure with Nema socket		
						Flat Glass	Shallow GL	Shallow PC	Flat Glass	Shallow GL	Shallow PC
Electronic	CL1	220-250	ORACLE 70W HST DGE	ST	E27	96258015	96258248	96257768	96257769	96257950	96257767
			ORACLE 70W HIT DGE	MT (CE)	E27	96258016	96257952	96257773	96257774	96257951	96257772
			ORACLE 100W HIDE	ST/MT (CE)	E40	96257762	96258247	96257760	96257761	96257947	96257759
			ORACLE 150W HIDE	ST/MT (CE)	E40	96257748	96258245	96257746	96257747	96257942	96257745
			ORACLE 45W HIT-CE	MT (CE)	PGZ12	96257808	96258621	96257806	96257807	96257966	96257805
			ORACLE 60W HIT-CE	MT (CE)	PGZ12	96257780	96258249	96257778	96257779	96257955	96257777
			ORACLE 90W HIT-CE	MT (CE)	PGZ12	96257814	96258253	96257812	96257813	96257968	96257811
Conventional	CL1	240	ORACLE 50/70W HID	ST/MT (CE)	E27	96257797	96258252	96257798	96257791	96257961	96257792
			ORACLE 100W HID	ST/MT (CE)	E40	96257795	96258251	96257796	96257789	96257960	96257790
			ORACLE 150W HID	ST/MT (CE)	E40	96257793	96258250	96257794	96257787	96257959	96257788
TELEA RF	CL1	220-250	ORACLE 70W/LDRF HST	ST	E27	96257819	96257971	96257820			
			ORACLE 100W/LDRF HIDE	ST/MT (CE)	E40	96257737	96257938	96257738			
			ORACLE 150W/LDRF HIDE	ST/MT (CE)	E40	96257739	96257939	96257740			

Note: Minicell versions are also available on request



Accessory

Description	SAP Code
ORACLE S LOUVRES	96258588

Lighting Controls

e-Control is Thorn's initiative to increase the use of dimming and lighting control in products and lighting solutions.

The continuing importance of efficient energy use (on both cost and environmental grounds), together with a need for more flexible application of lighting to streets, has led to a reassessment of lighting techniques and given a fresh impetus to the drive for more efficient controls.

Oracle S offers a wide choice of reliable solutions, including:

- Photocell options such as a Nema socket, or Minicell socket on request, provide basic control
- Electronic ballasts burn less energy and offer longer lamp life
- Step switching ballasts reduce the lighting and power consumption levels in pre-established steps
- Remote monitoring systems, such as Thorn's Telea, offer an extra dimension, allowing cost-effective energy and maintenance management in an easy, flexible and safe way

Oracle S lanterns with Telea capability enable lighting control of individual light points to be performed from a centralised point without the need to install any complex software or undertake extensive training. This enables the innovative facility manager to achieve optimum lighting for any environment.

The Oracle S accepts PowerLine (PL) or Radio Frequency (RF) integrated controllers which transmit 'event' data and control either conventional or electronic gear.

The LSC Switch Dim PL controller is required for conventional gear and Step Dim PL, LDC Stepless Dim PL or LDRF Stepless Dim RF controllers for electronic gear. Even a LSRF Switch RF controller (switch only, no dimming) can turn a NEMA-socket equipped Oracle S into a Telea luminaire.



Power control



PowerLine



Radio Frequency

THORN

Lighting people and places

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