Iridium²

Lighting the road ahead

PHILIPS

sense and simplicity

Iridium² - Innovative road lighting solution

Iridium has been the benchmark in terms of road lighting for the past decade with best-in-class performance and timeless design. Iridium² is not a revolution but an evolution of Iridium, building on 10 years of experience and more than 1.5 million luminaires installed in the field. Iridium² will allow you to smoothly move to innovative and energy-efficient solutions such as new electronic drivers, LED, RF telemanagement and controls.

Iridium² is a family of road-lighting luminaires designed around performance and sustainability. Depending on application and budget, you are free to start with LED or electronic HID (eHID), or use a mix of both technologies with the same luminaire. Whatever the initial choice, Iridium²'s modularity allows a quick and easy upgrade of your lighting installation (LED to LED or eHID to LED) whenever you want, just by changing the light engine.

The integration of LEDGINE 2.0, together with brand-new HID optics, electronic gear and controls, meets the growing demand for energy savings. The new Iridium² HID optics have been designed to give best-in-class lighting performance with the highest flexibility in terms of application. Combined with the ease of installation and maintenance, Iridium² ensures that you will enjoy the lowest cost of ownership.

Iridium² - Highest performance without compromising on lighting quality

Iridium² CosmoPolis optic

LEDGINE 2.0 optics

Flat glass in Iridium²

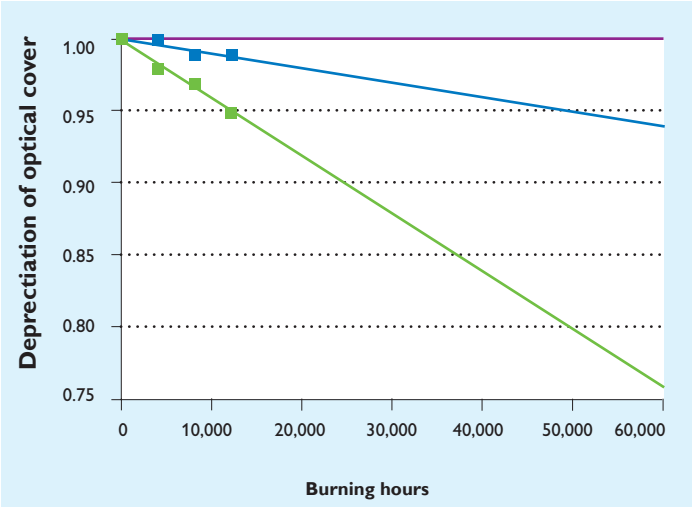
Thanks to the design of the brand-new HID optics, Iridium² is reaching the physical limits, with increased spacing of up to +15% compared to the existing Iridium. This is possible thanks to the innovative concept of assembled optics. The assembly of highly reflective metal parts means that the material is not damaged and very high reflectivity is obtained. The Light Output Ratio of the optic itself has risen to 92%. This new optic is used in combination with an extra-clear flat glass in order to ensure maximum performance.

The optics have been optimized for CosmoPolis and high-pressure sodium lamps, bringing further flexibility to the Iridium² range. Glare control is achieved by lamp position adjustments (up to G6 classes).

Iridium² integrates the most efficient LED platform, LEDGINE 2.0, with optimized spacing and efficacy up to 112 lm/W at system level. This LED platform ensures that you will get unequaled energy savings.

LEDGINE 2.0 is perfectly adapted to LED road-lighting requirements. It combines the following features to give you the best Total Cost of Ownership: serviceability, upgradeability, lighting quality, multiple applications.

Iridium² is the one luminaire on the market that attains highest performance using only flat glass to preserve the dark sky (0 candela at 90° / glare control) and ensures the best maintenance factor, whatever the light source.

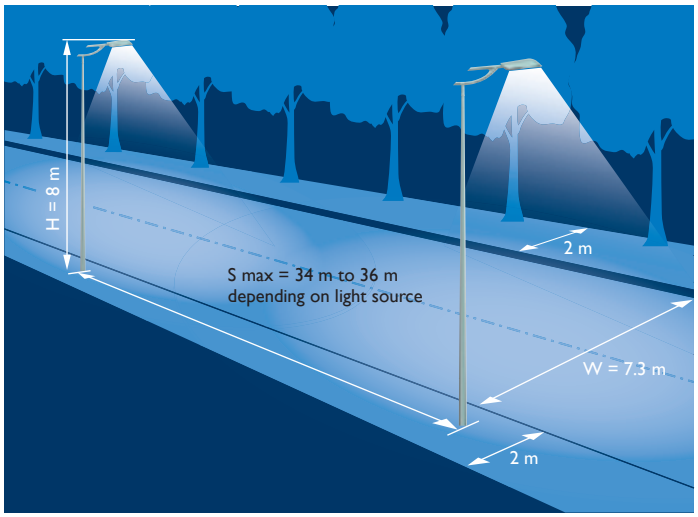


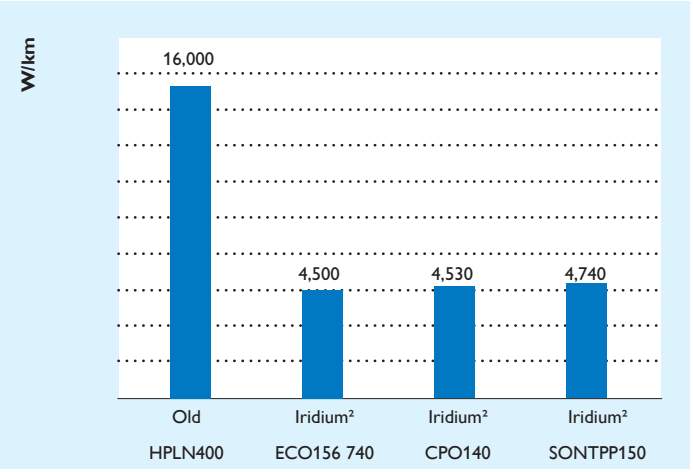
Aging of optical cover as a function of burning hours

Case study

Iridium² on application:

- Lighting class: ME3a (≥ 1.0 cd/m²)
- Carriageway: single
- Number of lanes: 2
- Adjacent pavements on each side





Up to 80% energy saving over an old HPL installation

Architecture of Iridium² eHID

High-quality aluminum canopy, painted

Internal fins for optimized thermal management

Flexible spigot allowing the luminaire to be installed on post top (0 or 5° tilt) or side entry with 2 M10 screws

New Xtreme ballasts from Philips, allowing maximum energy savings thanks to numerous integrated options / DALI

High-quality aluminum frame, painted

Plastic interface, allowing easy upgrade to LED

Extra-white flat glass for all versions

Fully integrated opening clip

Gear tray removable without tool for easy maintenance

Space allowing additional controls / telemanagement systems to be integrated

Vertical and horizontal lamp adjustment to optimize light distribution on the road and energy savings

Innovative assembled HID optic made of highly reflective material, enabling an LOR of up to 92%

Architecture of Iridium² LED

Internal fins for optimized thermal management

Location for Minicell, Nema socket or RF antenna

Gear tray removable without tool for easy maintenance

New LED driver allowing maximum energy savings thanks to numerous integrated options / DALI

Plastic interface, allowing easy upgrade of LED

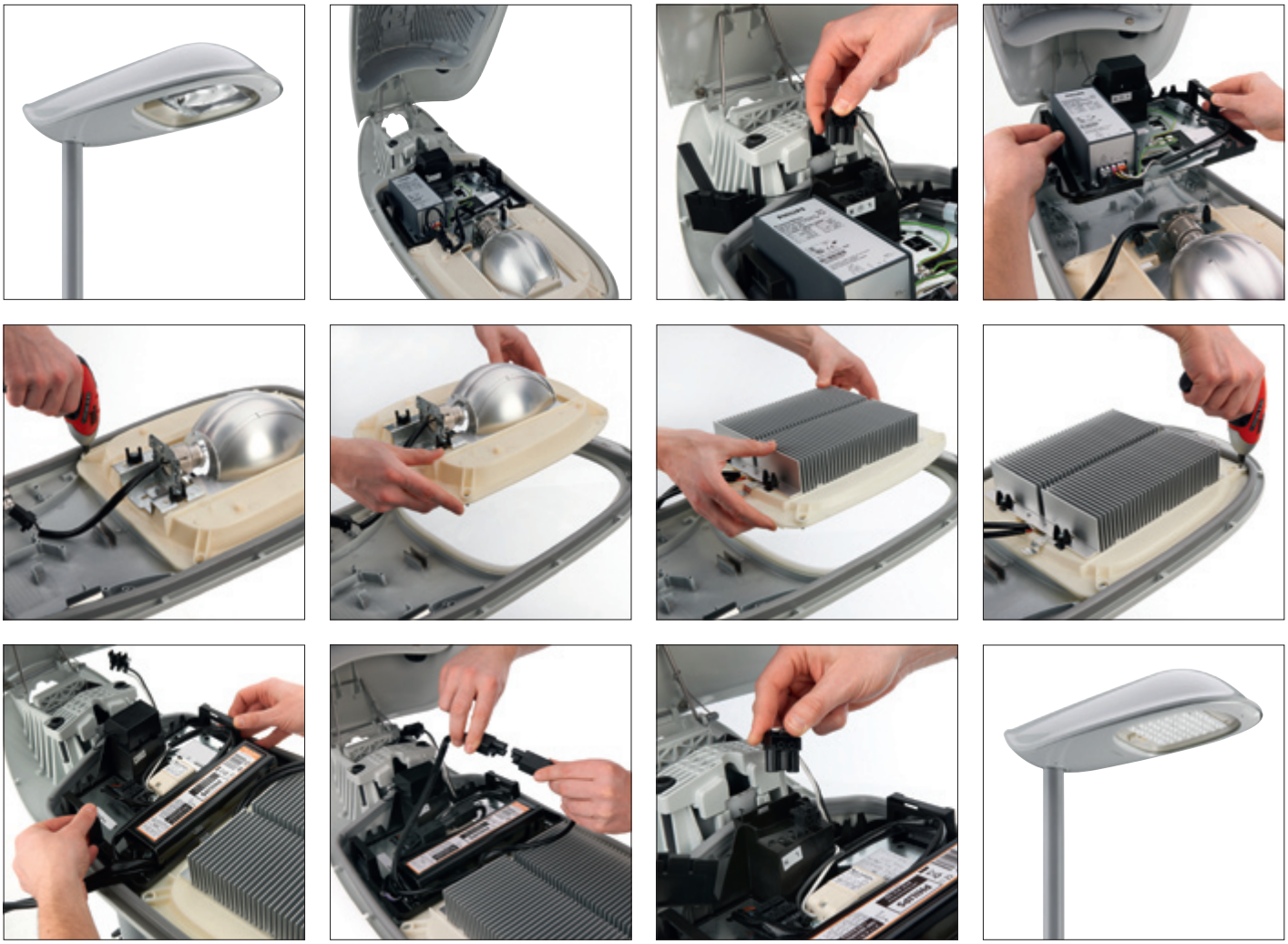
Space allowing additional controls / telemanagement systems to be integrated

LED module exchangeable / upgradeable without tool so that you always have the most efficient solution

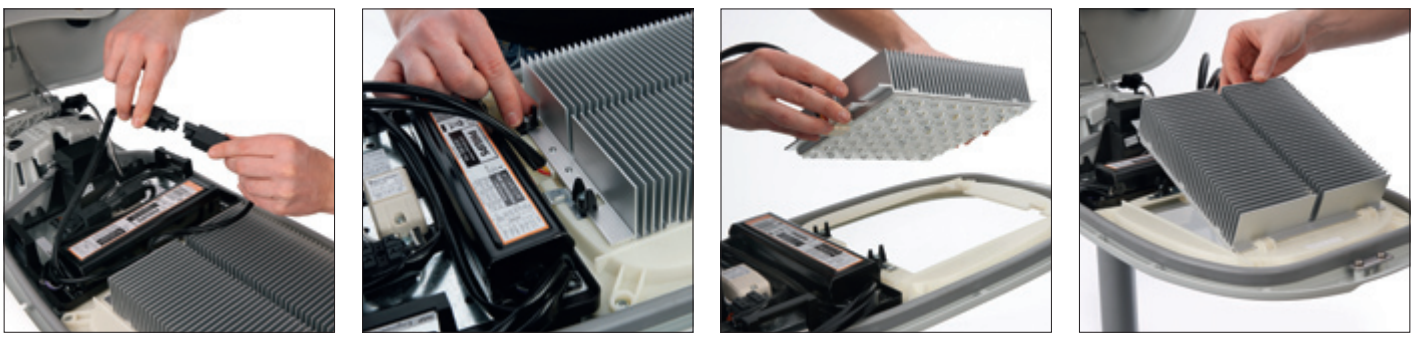
Extra-white flat glass for all versions

Iridium² - Future-proof luminaire

Iridium² ensures maximum energy savings thanks to its modularity. Feel free to start with an eHID version and later switch very easily to LED – in less than 3 minutes!



Or start with an LED version and upgrade the LED engine whenever you want – no tool required! – for further energy savings or for maintenance without having to replace the whole luminaire:



Iridium² - Maximum flexibility

Thanks to Iridium²'s family approach, the same luminaire design can be used for all projects, offering full flexibility by covering all applications, with a choice of price and technology.

Application areas covered thanks to Iridium²

Motorways, highways, expressways, perephial motorways

Main roads within/ between cities

Mixed traffic road in city center

Residential streets

Car parks

Walking, cycling and running paths

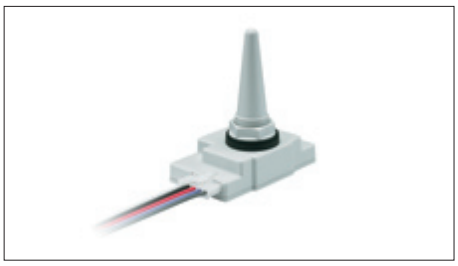
Iridium² - Green luminaire

The end of life of the luminaire has been taken into account in the design of Iridium², enabling it to be 100% recycled. No glue is used inside the luminaire, so every part can be dismantled and recycled. Keep in mind that whenever you want, you are able to upgrade your luminaire (LED to LED or eHID to LED) and keep the complete housing of the luminaire. This greatly reduces the amount of components to be recycled.

To go one step further, we have decided to neutralize the greenhouse gas impact of Iridium² manufacturing. To achieve this, the carbon footprint of the materials used to produce Iridium² and of those used in its manufacturing and recycling phases has been assessed. This carbon footprint is then offset by financing verified and certified projects intended to reduce greenhouse gas emissions through our partner, Climate Neutral Group.

Iridium² - Sustainable luminaire thanks to new electronic drivers and LED

Xtreme driver

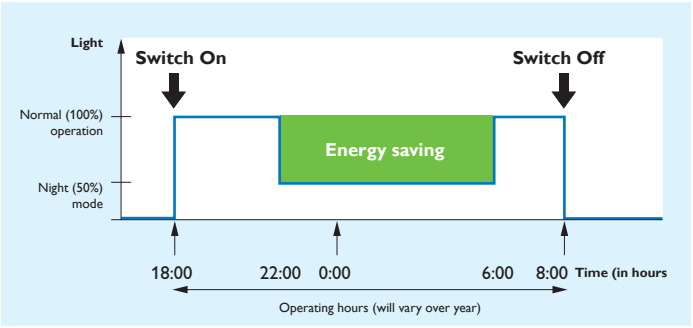


RF antenna

Telemanagement software

New Philips eHID Xtreme drivers and LED technology offer the freedom to adjust the light level of Iridium² precisely according to the application in order to maximize energy savings.

With electronic and LED technology, a fixed-output solution no longer makes sense. Very simple stand-alone control devices such as Lumistep or Dynadimmer will give you up to 20% energy savings.



Networked control devices will improve the energy savings even further (up to 40% versus fixed output), e.g. group management systems (mains dimming, AmpLight …) or our state-of-the-art control systems: telemanagement via RF antenna or OLC (Outdoor Luminaire Controller) in the luminaire, allowing each individual light point to be fully controlled and monitored.

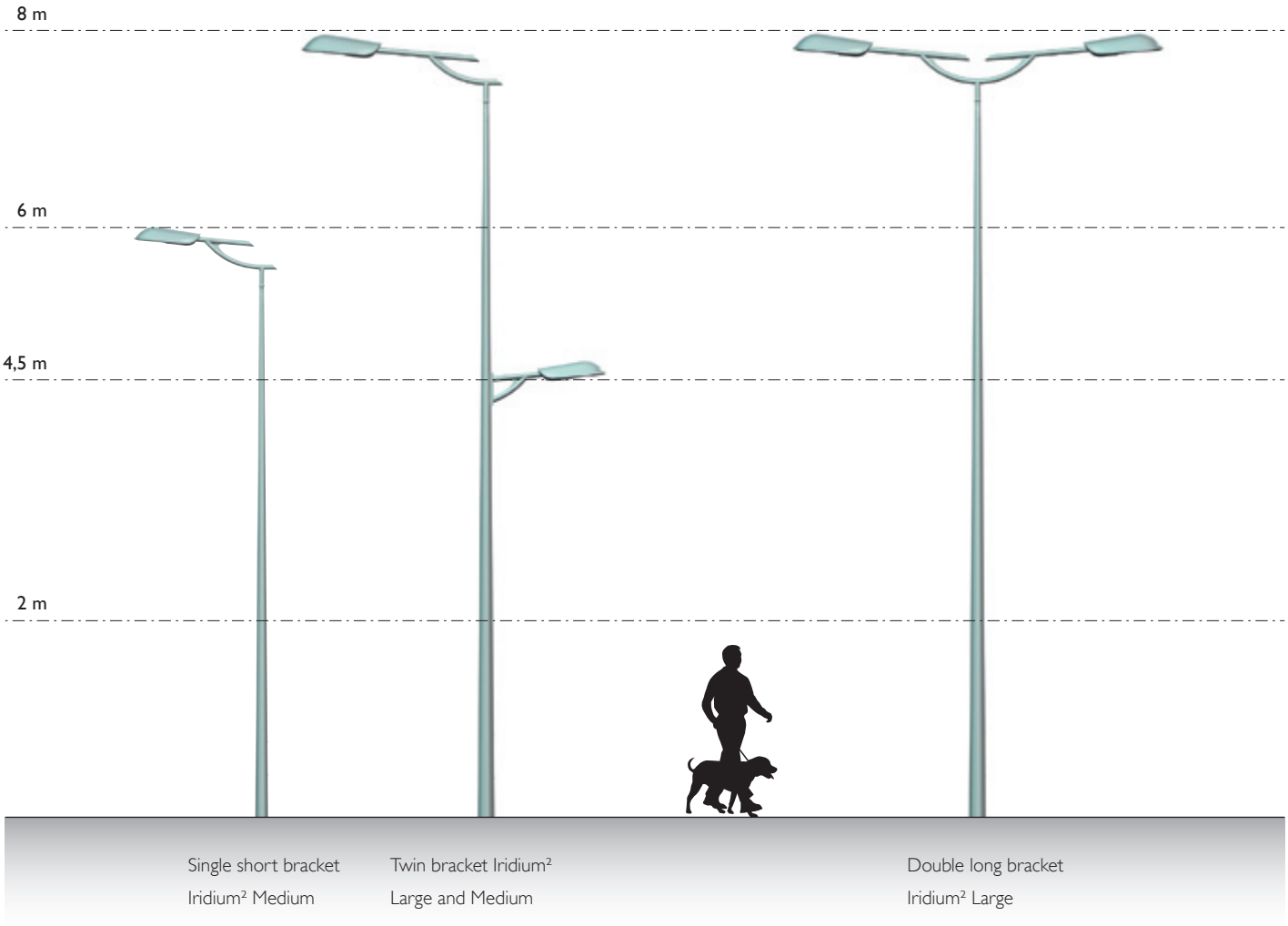
Controls available in Iridium²

Control system	User benefits	Control options	User benefits	Energy saving
Networked				
Lightpoint management RF antenna Starsense	To **fully control** and **monitor** each **individual** light point	DALI	• Global universal interface (compatibility) • On/Off switching • Stepless dimming • Provide detailed info on lamp system	Maximum energy savings up to 40%
		1-10 V	• Simple stepless dimming	
Group management Amplight Cabinet dimming	To provide **Monitoring and** control **over groups** of light points	Mains dimming *	• Simple dimming by lowering mains	Energy savings up to 25%
		SDU Pilot line *	• Simple dimming by extra control line	
Stand-alone				
Lightpoint control	To locally set the **right amount** of efficient light at the **right place** at the **right time**	Light level adjustment	• Adjust the light level to the application	Energy savings up to 20%
		Dynadimmer	• Programmable auto dimming (5 steps)	
		Lumistep	• Auto dimming (1 step)	

* For suitable installations only

Masts and brackets

The smooth, distinctive design of Iridium² is further enhanced when used in combination with the Iridium² mast and bracket range.



Single short bracket
Iridium² Medium

Twin bracket Iridium²
Large and Medium

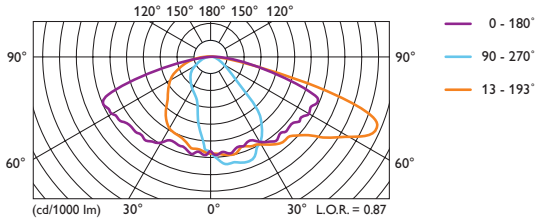
Double long bracket
Iridium² Large

Photometry of Iridium² eHID

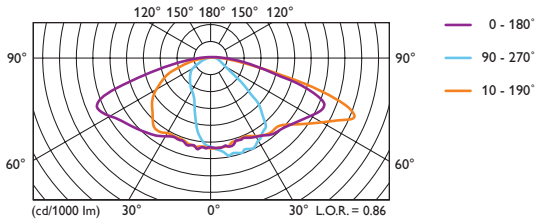
Thanks to new HID optics, Iridium² offers high performance and maximum flexibility in application.

Iridium² Medium

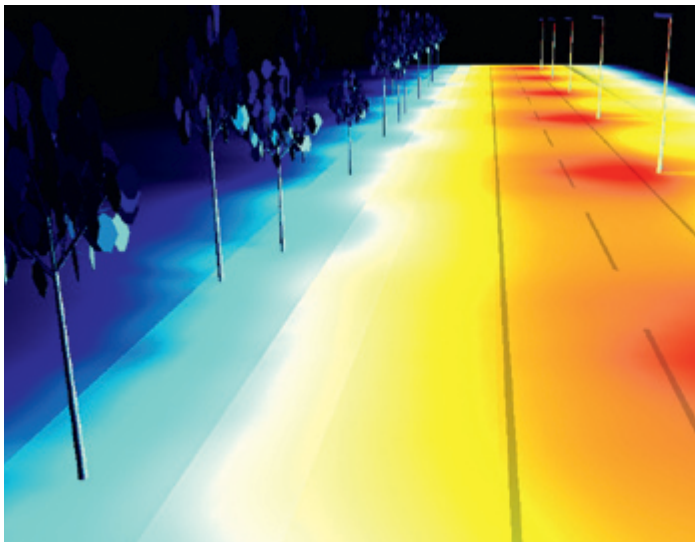
Optics	CPO-TW				SON-TPP				CDO-TT		
	45 W	60 W	90 Wæ	140 W	50 W	70 W	100 W	150 W	70 W	100 W	150 W
FX1 - CPO	•	•	•	•							
FX2 - CPO	•	•	•	•							
FX1 - SON - T					•	•	•	•			
FX2 - SON - T					•	•	•	•			
FX2 - CDO - TT									•	•	•



Polar intensity diagram of FX1 optic with CPO-TW 90 W



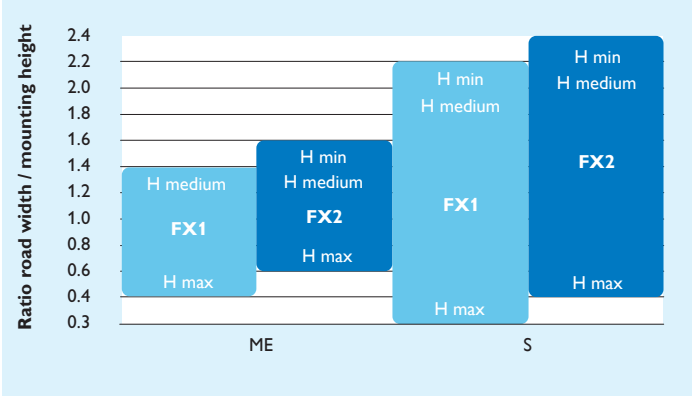
Polar intensity diagram of FX2 optic with CPO-TW 90 W



Lighting distribution of the FX1 optic with CPO-TW 90 W

Hmax/Hmedium/Hmin = Horizontal lamp position adjustment, allowing flexibility in application and the distribution to be adapted to the road.

It is strongly advised that simulations be conducted on applications with both FX1 and FX2 optics in order to obtain optimized spacings.

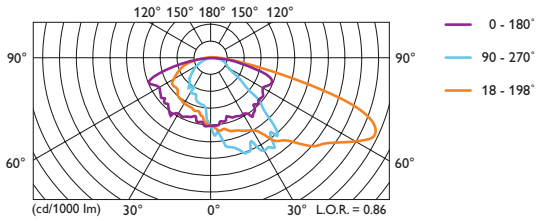


Different HID optics for different applications (CosmoPolis optics example)

Photometry of Iridium² eHID

Iridium² Large

Optics	SON-TPP		CDM-Elite	CDO-TT	
	150 W	250 W	210 W	150 W	250 W
FX1 - SON - T	•	•			
FX2 - SON - T	•	•			
FX2 - CDO - TT / CDM Elite			•	•	•

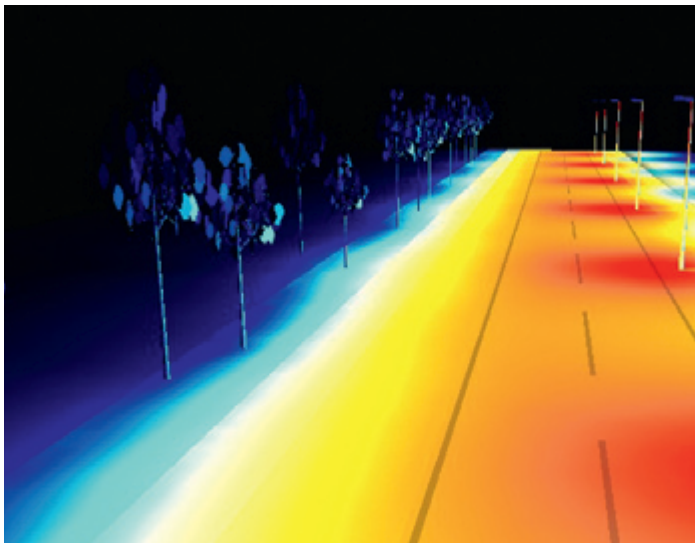


Polar intensity diagram of FX2 optic with SON-TPP 250 W

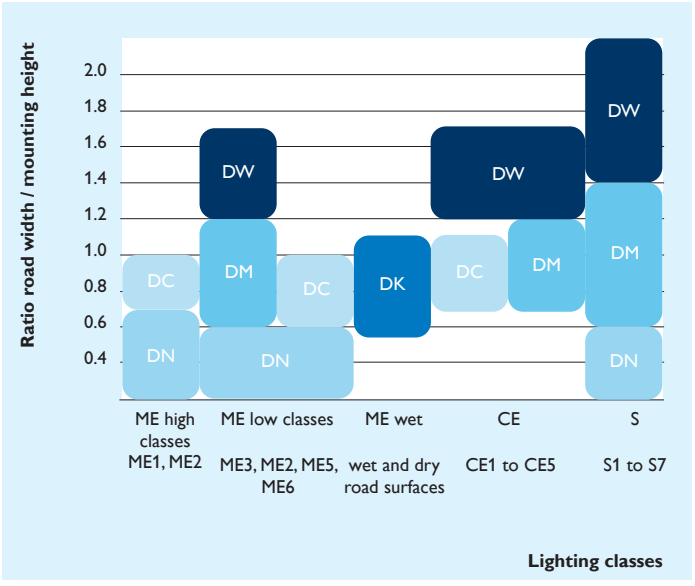
Photometry of Iridium² LED

The new LED platform LEDGINE 2.0 brings high energy savings and great flexibility to applications thanks to a wide choice of distributions.

	Iridium² Medium	Iridium² Large
Green line	up to 9,300 lm	up to 17,600 lm
Economy line	up to 15,000 lm	up to 27,000 lm
Light source efficacy (lm/W)	up to 127 lm/W	up to 139 lm/W
Luminaire Efficacy Rating LER (lm/W)	up to 110 lm/W	up to 110 lm/W
Lighting distribution	DN (Narrow), DM (Medium), DW (Wide), DC (Comfort), DK (Wet Road), A (Asymetric), DP (Pedestrian crossing)	



Lighting distribution of the DM optic with ECO113-S/740 configuration



Different LED optics for different applications

Main specifications

Iridium² eHID Medium

Iridium² eHID Large

Iridium² LED Medium

Iridium² LED Large

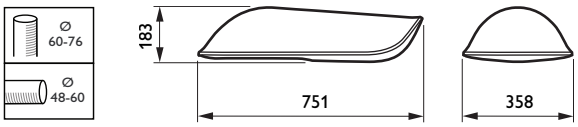
Main specifications		
IP level of the luminaire		IP66
Mechanical resistance		IK08
Nominal voltage		230 V – 50/60 Hz
Electrical class		I or II
Glass cover		Flat glass
Housing		Aluminum
Standard color		All grey (RAL 7035)
Opening of the luminaire		From above without tool
Installation height:	Iridium² Medium	5 to 10 m
	Iridium² Large	8 to 15 m
Maximum weight:	Iridium² Medium	12 kg
	Iridium² Large	17 kg

Options
All RAL or AKZO colors
Minicell, Nema socket
Fuses

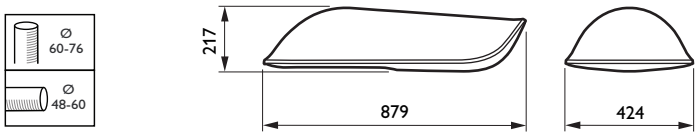
Controls
Lumistep
Dynadimmer
Mains dimming
Light level adjustment
External dimming 1-10 V / DALI
Lineswitch (via pilot line) or SDU
Telemanagement with Starsense or RF antenna

Installation	
Post-top position	0 and 5°
Post-top diameter	60 and 76 mm
Side-entry position	0°
Side-entry diameter	48 and 60 mm
Fastening	2 M10 screws

Dimensions



Iridium² Medium



Iridium² Large

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