Schréder
Experts in lightability™
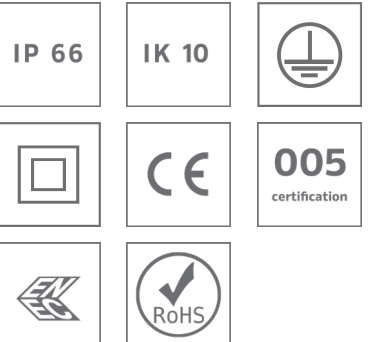
OYO

Designer : Michel Tortel

owlet® LENSO FLEX™ 2

The perfect match between elegance and performance

OYO follows in the steps of the successful range of post-top luminaires developed by Schréder. This new smart luminaire has been designed to blend into any urban area where its sophisticated outline will enhance the environment.

With its arched design on two refined supports, this new decorative luminaire brings a contemporary touch of elegance to the city.

Based on the proven LensoFlex®2 photometrical engine, OYO offers a wide range of light distributions to provide a harmonious compromise between safety, comfort and energy efficiency for various environments.

As an option, OYO can be equipped with a 7-pin NEMA socket or a Zhaga Socket to be controlled by remote management for even more efficiency. It can also be fitted with an integrated PIR sensor for light-on-demand scenarios.

IP 66   IK 10

005 certification

CE   RoHS

URBAN & RESIDENTIAL STREETS   BRIDGES   BIKE & PEDESTRIAN PATHS   RAILWAY STATIONS & METROS   CAR PARKS   SQUARES & PEDESTRIAN AREAS

Concept

The OYO range combines the energy efficiency of LED technology with the photometric performance of the LensoFlex©2 concept developed by Schréder. The luminaire is composed of a two-piece housing made of painted die-cast aluminum. The polycarbonate protector offers a high tightness level and a high impact resistance. OYO is designed for post-top mounting on a 60mm diameter spigot.

The photometric versatility of the OYO luminaire, which provides both asymmetrical and symmetrical light distributions, makes it the perfect tool for various lighting applications: pedestrian areas (parks, squares...), bike paths, residential streets, car parks and urban roads.

OYO proposes a broad range of control options: programmable drivers, photocell, remote management and motion detection features with a PIR sensor.

This connected ready luminaire is equipped with the latest remote technologies such as the NEMA 7-pins or the Zhaga socket to offer a realistic solution for smart cities.

To facilitate installation, the Oyo luminaire is supplied with a pre-fitted cable.

Oyo offers slip-over mounting onto a 60mm diameter spigot with 6 M8 screws.

TYPES OF APPLICATION

- URBAN & RESIDENTIAL STREETS
- BRIDGES
- BIKE & PEDESTRIAN PATHS
- RAILWAY STATIONS & METROS
- CAR PARKS
- SQUARES & PEDESTRIAN AREAS

KEY ADVANTAGES

- Elegant and robust design by Michel Tortel
- State-of-the-art LED technology for low energy consumption
- LensoFlex®2 providing asymmetrical and symmetrical light distributions
- Supplied pre-cabled to facilitate its installation
- Integrated motion detection sensor (option)
- Smart-city ready (NEMA) and ZD4i compliant (Zhaga)

The optional 7-pin NEMA socket can be equipped with a shorting cap at delivery.

Oyo can be equipped with a PIR sensor to create light-on-demand scenarios.

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LensoFlex®2

LensoFlex®2 is based upon the addition principle of photometric distribution. Each LED is associated with a specific PMMA lens that generates the complete photometric distribution of the luminaire. The number of LEDs in combination with the driving current determines the intensity level of the light distribution.

Back Light control

As an option, the LensoFlex®2 and LensoFlex®4 modules can be equipped with a Back Light control system.

This additional feature minimises light spill from the back of the luminaire to avoid intrusive light towards buildings.
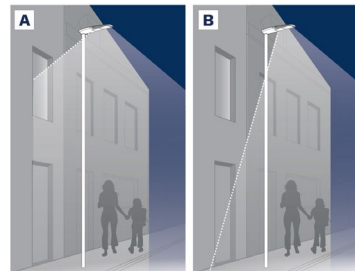

A. Without Back Light control | B. With Back Light control

Custom dimming profile

Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring.

The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings while respecting the required lighting levels and uniformity throughout the night.
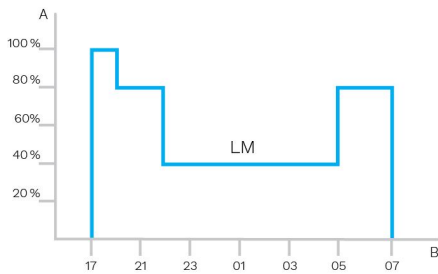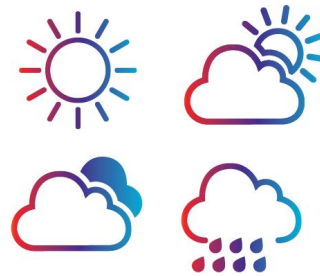
A. Dimming level | B. Time

Daylight sensor / photocell

Photocell or daylight sensors switch the luminaire on as soon natural light falls to a certain level. It can be programmed to switch on during a storm, on a cloudy day (in critical areas) or only at nightfall so as to provide safety and comfort in public spaces.

PIR sensor: motion detection

In places with little nocturnal activity, lighting can be dimmed to a minimum most of the time. By using passive infrared (PIR) sensors, the level of light can be raised as soon as a pedestrian or a slow vehicle is detected in the area.

Each luminaire level can be configured individually with several parametres such as minimum and maximum light output, delay period and ON/OFF duration time. PIR sensors can be used in an autonomous or interoperable network.
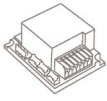
IzyHub

IzyHub is an innovative device that aims to keep luminaire installation and maintenance hassle-free. This single central connection hub distributes electricity and control information to all parts of the luminaire, ensuring that all components work together and offering reliable, long-term performance.

Its compact size and error-proof connections enable smaller and lighter luminaires that are easier to maintain and upgrade.

Surge Protection

IzyHub features a built-in surge protection device. This prevents electrical surges resulting from lightning strikes and other transient voltages that originate from the mains network from damaging the luminaire, even in the most demanding conditions. The protective device also includes an end-of-life LED warning light, indicating that the luminaire is protected correctly.

User-friendly

Installing a luminaire has never been easier. IzyHub features tool-free connector as the main connection terminal. It enables 30% shorter installation times compared with standard solutions. Lever actuated spring-loaded electrical connectors provide optimal contact throughout the entire life of the product.

Easy maintenance

On the rare occasion that a component needs to be replaced in the luminaire, IzyHub makes sure that operations are carried out quickly and easily. Luminaire component connections are keyed so that mixing up electrical connections is physically impossible. Installers do not need to trace wires individually: plug it in, and it works straight away.
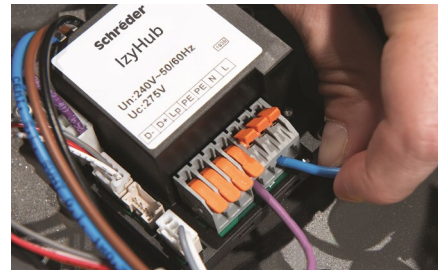
Versions and upgrades

IzyHub has several versions featuring different connectivity options.

IzyHub can include an SPD, can work with external dimming and operate with all type of control sockets. It is also able to provide bi-power control and to include fuse options.

These options provide flexibility for future upgrades by only having to replace the IzyHub to connect the new equipment. No complicated re-wiring needed.

owlet IoT

Owlet IoT remotely controls luminaires in a lighting network, creating opportunities for improved efficiency, accurate real-time data and energy savings of up to 85%.

ALL-IN-ONE

The LUCO P7 CM controller includes the most advanced features for optimised asset management. It also provides an integrated photocell and operates with an astronomical clock for seasonal dimming profile adaptations.

EASY TO DEPLOY

Thanks to wireless communication, no cabling is needed. The network is not subject to physical constraints or limitations.

From a single control unit to an unlimited network, you can expand your lighting scheme at any time.

With real-time geolocation and automatic detection of luminaire features, commissioning is quick and easy.

USER-FRIENDLY

Once a controller is installed on a luminaire, the luminaire automatically appears with its GPS coordinates on a web-based map.

An easy-to-use dashboard enables each user to organise and customise screens, statistics and reports. Users can gain relevant, real-time insights.

The Owlet IoT web application can be accessed at all times from anywhere in the world with a device connected to the Internet. The application adapts to the device to offer an intuitive and user-friendly experience.

Real-time notifications can be pre-programmed to monitor the most important elements of the lighting scheme.

Plugging the LUCO P7 CM controller onto the 7-pin NEMA socket

SECURE

The Owlet IoT system uses a local wireless mesh communication networks to control the on-site luminaires combined with a remote control system utilising the cloud to ensure smooth data transfers to and from the central management system.

The system uses encrypted IP V6 communication to protect data transmission in both directions. Using a secure APN, Owlet IoT ensures a high level of protection.

In the exceptional case of a communication failure, the built-in astronomical clock and photocell will take over to switch the luminaires on and off, thus avoiding a complete blackout at night.

EFFICIENT

Thanks to sensors and/or pre-programmed settings, lighting scenarios can be easily adapted to cope with live events, providing the right lighting levels at the right time and in the right place.

The integrated utility grade meter offers the highest accuracy available on the market today, enabling decisions based on real figures.

Accurate real-time feedback and clear reporting ensures that the network operates efficiently and maintenance is optimised.

When LED luminaires are switched on, the inrush current can create problems for the electricity grid. Owlet IoT incorporates an algorithm to preserve the grid at all times.

OPEN

The LUCO P7 CM controller can be plugged onto the standard 7 pin NEMA socket and operates through either a DALI or 1-10V interface to control the luminaire.

Owlet IoT is based on the IPv6 protocol. This method for addressing devices can generate an almost unlimited number of unique combinations to connect non-traditional components to the Internet or computer network.

Through open APIs, Owlet IoT can be integrated into existing or future global management systems.

The Zhaga consortium joined forces with the DiiA and produced a single Zhaga-D4i certification that combines the Zhaga Book 18 version 2 outdoor connectivity specifications with the DiiA's D4i specifications for intra-luminaire DALI.

Standardisation for interoperable ecosystems

As a founding member of the Zhaga consortium, Schréder has participated in the creation of, and therefore supports, the Zhaga-D4i certification program and the initiative of this group to standardise an interoperable ecosystem. The D4i specifications take the best of the standard DALI2 protocol and adapt it to an intra-luminaire environment but it has certain limitations. Only luminaire mounted control devices can be combined with a Zhaga-D4i luminaire. According to the specification, control devices are limited respectively to 2W and 1W average power consumption.

Certification program

The Zhaga-D4i certification covers all the critical features including mechanical fit, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability of luminaires (drivers) and peripherals such as connectivity nodes.
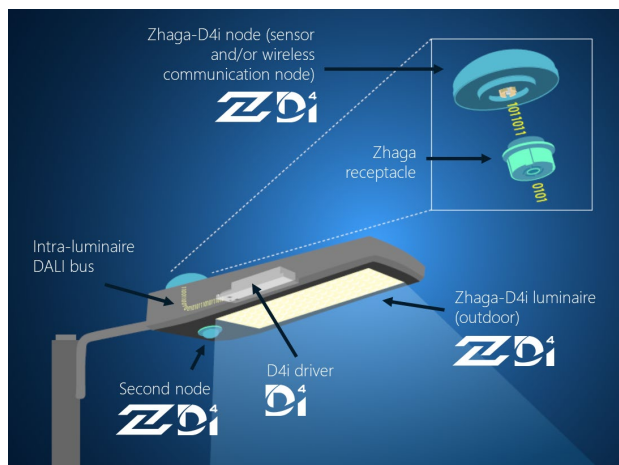
Cost-effective solution

A Zhaga-D4i certified luminaire includes drivers offering features that had previously been in the control node, like energy metering, which has in turn simplified the control device therefore reducing the price of the control system.

The Schréder Bluetooth solution consists of 3 main components:

• A Bluetooth dongle plugged into the modular driver of the luminaire (BLE transceiver)

• A Bluetooth antenna fitted on the luminaire

• A smartphone application called Sirius BLE

Easy to use

The Schréder Bluetooth solution is ideal for the on-site configuration of individual outdoor luminaires using Bluetooth. From the ground, the user is able to switch the luminaire on or off, adapt the dimming curve, read diagnostic data and much more. A user-friendly application called Sirius BLE provides an easy and secure access to the control and configuration functions.

Whether you are managing a lighting network in an urban or a residential area, this solution will make it easy to control your outdoor luminaires while simply standing by the pole.

Quick and easy pairing

Get the Sirius App from Schréder. Go to the menu. Press the "SCAN DEVICE (START)" button, to search for the surrounding BLE modules. They will be displayed with a bar graphic (signal intensity) to indicate the closest and the most distant one you can reach. Click on the device you want to connect to and enter your personal access key to control the luminaire.
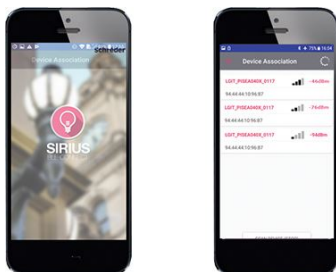
Defining the settings

Once you are connected to a luminaire, you can set various parameters such as the maximum output current, minimum dimming level and custom dimming profile.
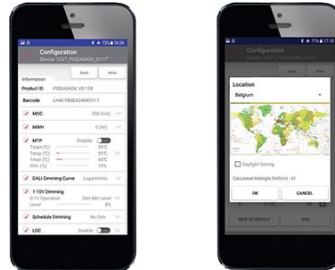
Manual dimming control

The App enables you to do a manual override to adapt the dimming levels instantly. Simply tap on the "Dimming" button in the main menu and adjust the dimming using the wheel and button. Predefined dimming levels can be applied immediately. The

corresponding value is displayed on the wheel. This enables you to test the ON / OFF and dimming features of the luminaire paired to the smartphone.

On-site diagnostic

When a luminaire is paired, you can access various diagnostic information: total number of power up events, operation time of LED module and driver, total energy consumption of LED driver… etc. You can also track operating events (short circuits, thermal shutdowns…). The diagnostic values may be the current state or values accumulated to date.

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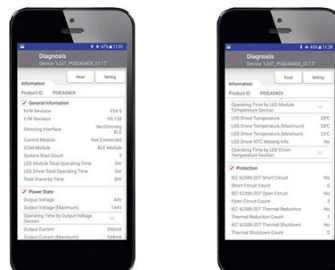
GENERAL INFORMATION

Recommended installation height	4m to 8m | 13' to 26'
Driver included	Yes
CE mark	Yes
ENEC certified	Yes
ROHS compliant	Yes
French law of December 27th 2018 - Compliant with application type(s)	a, b, c, d, e, f, g
BE 005 certified	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA
Protector	Polycarbonate
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 10
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	By loosening screws on the top cover

· Any other RAL or AKZO colour upon request

OPERATING CONDITIONS

Operating temperature range (Ta)	-30°C up to +55°C / -22°F up to 131°F

· Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class I EU, Class II EU
Nominal voltage	220-240V – 50-60Hz
Power factor (at full load)	0.9
Surge protection options (kV)	10
Electromagnetic compatibility (EMC)	EN 55015 / EN 61000-3-2 / EN 61000-3-3 / EN 61547
Control protocol(s)	Bluetooth, 1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket	Optional Zhaga socket - Zhaga-D4i certified product NEMA 7-pin (optional)
Associated control system(s)	Sirius BLE Owlet IoT
Sensor	PIR (optional)

OPTICAL INFORMATION

LED colour temperature	2200K (Warm White 822) 2700K (Warm White 727) 3000K (Warm White 730) 3000K (Warm White 830) 4000K (Neutral White 740)
Colour rendering index (CRI)	>80 (Warm White 822) >70 (Warm White 727) >70 (Warm White 730) >80 (Warm White 830) >70 (Neutral White 740)
Upward Light Output Ratio (ULOR)	0%

LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90

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DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	610x440x610 | 24.0x17.3x24.0
Weight (kg | lbs)	10 | 22.0
Aerodynamic resistance (CxS)	0.16
Mounting possibilities	Post-top slip-over – Ø60mm

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Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 727		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 822		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Neutral White 740		Power consumption (W)	Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		Up to	
OYO	16	200	900	1100	1000	1200	700	800	900	1100	1000	1200	11	109	LENSOFLEX²2
	16	300	1300	1600	1500	1800	1000	1200	1300	1600	1500	1800	15.8	114	LENSOFLEX²2
	16	400	1700	2100	1900	2300	1400	1600	1700	2100	2000	2400	20.8	115	LENSOFLEX²2
	16	500	2100	2500	2400	2800	1700	2000	2100	2500	2400	2900	25.9	112	LENSOFLEX²2
	16	600	2500	2900	2700	3300	1900	2300	2500	2900	2800	3400	31.1	109	LENSOFLEX²2
	16	700	2800	3300	3100	3700	2200	2600	2800	3300	3200	3800	36.4	104	LENSOFLEX²2
	16	800	3100	3700	3400	4100	2400	2900	3100	3700	3600	4200	41.5	101	LENSOFLEX²2
	16	850	3200	3800	3600	4300	2500	3000	3200	3800	3700	4400	44.5	99	LENSOFLEX²2
	24	200	1400	1600	1500	1800	1100	1300	1400	1600	1600	1900	15.4	123	LENSOFLEX²2
	24	300	2000	2400	2300	2700	1600	1900	2000	2400	2300	2800	22.5	124	LENSOFLEX²2
	24	350	2300	2800	2600	3100	1800	2200	2300	2800	2700	3200	26.2	124	LENSOFLEX²2
	24	400	2600	3100	2900	3500	2100	2500	2600	3100	3000	3600	30.3	119	LENSOFLEX²2
	24	500	3200	3800	3600	4200	2500	3000	3200	3800	3700	4400	36.6	120	LENSOFLEX²2
	24	590	3700	4300	4100	4800	2900	3400	3700	4300	4200	5000	44	114	LENSOFLEX²2
	32	200	1900	2200	2100	2500	1500	1700	1900	2200	2100	2500	20	125	LENSOFLEX²2
	32	300	2700	3200	3000	3600	2100	2500	2700	3200	3100	3700	29.6	125	LENSOFLEX²2
	32	400	3500	4200	3900	4600	2800	3300	3500	4200	4000	4800	39.3	122	LENSOFLEX²2

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 727		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 822		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Neutral White 740		Power consumption (W)	Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		Up to	
OYO	32	450	3900	4600	4300	5100	3100	3600	3900	4600	4500	5300	45.5	116	LENSO FLEX 2
	32	500	4300	5100	4800	5600	3400	4000	4300	5100	4900	5800	50	116	LENSO FLEX 2
	32	600	5000	5900	5500	6600	3900	4700	5000	5900	5700	6800	60	113	LENSO FLEX 2
	32	700	5600	6700	6300	7400	4400	5300	5600	6700	6500	7700	70	110	LENSO FLEX 2
	32	800	6200	7400	6900	8200	4900	5800	6200	7400	7200	8500	80	106	LENSO FLEX 2
	40	200	2300	2800	2600	3100	1800	2200	2300	2800	2700	3200	24.5	131	LENSO FLEX 2
	40	300	3400	4000	3800	4500	2700	3200	3400	4000	3900	4600	36.7	125	LENSO FLEX 2
	40	350	3900	4600	4400	5200	3100	3700	3900	4600	4500	5300	42.5	125	LENSO FLEX 2
	40	400	4400	5200	4900	5800	3500	4100	4400	5200	5100	6000	48.5	124	LENSO FLEX 2
	40	500	5300	6300	6000	7000	4200	5000	5300	6300	6200	7300	61	120	LENSO FLEX 2
	40	600	6200	7400	6900	8200	4900	5800	6200	7400	7200	8500	73	116	LENSO FLEX 2
	48	200	2800	3300	3100	3700	2200	2600	2800	3300	3200	3800	28.9	131	LENSO FLEX 2
	48	300	4100	4800	4600	5400	3200	3800	4100	4800	4700	5600	43	130	LENSO FLEX 2
	48	400	5300	6300	5900	7000	4200	5000	5300	6300	6100	7200	57.5	125	LENSO FLEX 2
	48	500	6400	7600	7200	8500	5100	6000	6400	7600	7400	8700	73	119	LENSO FLEX 2
	48	550	7000	8200	7800	9200	5500	6500	7000	8200	8000	9500	80	119	LENSO FLEX 2

Tolerance on LED flux is ± 7% and on total luminaire power ± 5 %

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5068

5068 SY

5096

5096 SY

5098

5098 SY

5102

5102 - BL

5102 SY

Schréder

5103
LENSO FLEX™ 2

5103 SY
LENSO FLEX™ 2

5112
LENSO FLEX™ 2

5117
LENSO FLEX™ 2

5117 - BL
LENSO FLEX™ 2

5117 SY
LENSO FLEX™ 2

5118
LENSO FLEX™ 2

5118 - BL
LENSO FLEX™ 2

5118 SY
LENSO FLEX™ 2

Schréder

5119
LENSO FLEX™ 2

5119 - BL
LENSO FLEX™ 2

5119 SY
LENSO FLEX™ 2

5120
LENSO FLEX™ 2

5120 - BL
LENSO FLEX™ 2

5120 SY
LENSO FLEX™ 2

5121
LENSO FLEX™ 2

5121 - BL
LENSO FLEX™ 2

5121 SY
LENSO FLEX™ 2