HapiLED

Designer : Michel Tortel
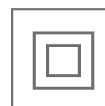

LENSO
FLEX™ 2

Ambiance combined with energy performance

Lighting parks, squares and residential areas requires a specific approach that is very different from lighting roads. The creation of ambiance plays a prominent role.

However this must not be done at the expense of efficiency.

The age of the opal sphere luminaire with high energy consumption and a source of light pollution is gone forever.

The HapiLED, an economical, aesthetic, robust and efficient LED solution, is here to replace it.

IP 66   IK 10

RoHS

URBAN & RESIDENTIAL STREETS

BRIDGES

BIKE & PEDESTRIAN PATHS

RAILWAY STATIONS & METROS

CAR PARKS

SQUARES & PEDESTRIAN AREAS

Concept

HapiLED combines the energy efficiency of LED technology with the photometric performance of the LensoFlex®2 concept developed by Schréder.

The luminaire is composed of 3 main elements: a mounting part and a top cover made of painted die-cast aluminium with a protector in anti-UV polycarbonate. The ensemble offers a high tightness level and a high impact resistance. HapiLED is designed for post-top mounting on a 60mm diameter spigot.

HapiLED provides an economical, aesthetic, comfortable, robust and efficient LED solution for the creation of ambiance. Thanks to its versatility, it offers many assets for a timeless and future-oriented lighting solution. The photometric versatility of the HapiLED 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.

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

HapiLED offers an easy access to the optical and gear compartments for maintenance.

HapiLED offers slip-over mounting onto a 60mm diameter spigot with 6 M6 screws.

TYPES OF APPLICATION

• URBAN & RESIDENTIAL STREETS

• BRIDGES

• BIKE & PEDESTRIAN PATHS

• RAILWAY STATIONS & METROS

• CAR PARKS

• SQUARES & PEDESTRIAN AREAS

KEY ADVANTAGES

• Elegant and comfortable solution for creating a warm ambiance

• Low energy consumption

• Low light pollution (ULOR 3%)

• Several light distributions

• FutureProof : smart upgradability

• Supplied pre-cabled to facilitate its installation

HapiLED is equipped with an internal diffusor for superior visual comfort.

The striated polycarbonate protector combines elegance and robustness (IK 10).

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.
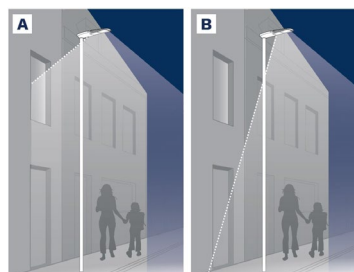

A. Without Back Light control | B. With Back Light control

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.
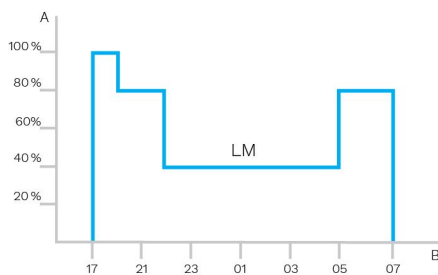
A. Dimming level | B. Time
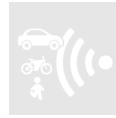
PIR sensor: motion detection

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.

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.

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.

HapiLED | Bluetooth solution

Schréder

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.
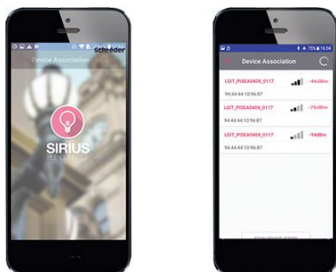
Defining the settings

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.
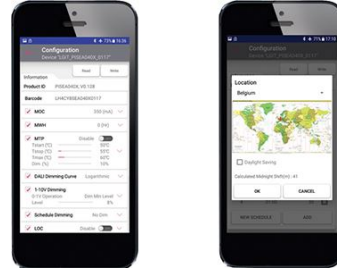
Manual dimming control

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.
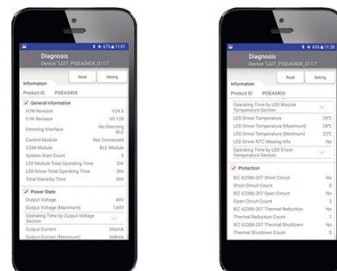
GENERAL INFORMATION

Recommended installation height	3m to 5m	10' to 16'
FutureProof	Easy replacement of the photometric engine and electronic assembly on-site
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
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	Direct access to the gear compartment 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 +35 °C / -22 °F up to 95°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)	0.95+
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, Remote management
Socket	NEMA 7-pin (optional) Low voltage socket (optional)
Associated control system(s)	Sirius BLE Owlet Nightshift 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)	<4%

LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90

Schréder

DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	410x556x410 | 16.1x21.9x16.1
Weight (kg | lbs)	6 | 13.2
Aerodynamic resistance (CxS)	0.08
Mounting possibilities	Post-top slip-over – Ø60mm

HapiLED | PERFORMANCE

Schréder
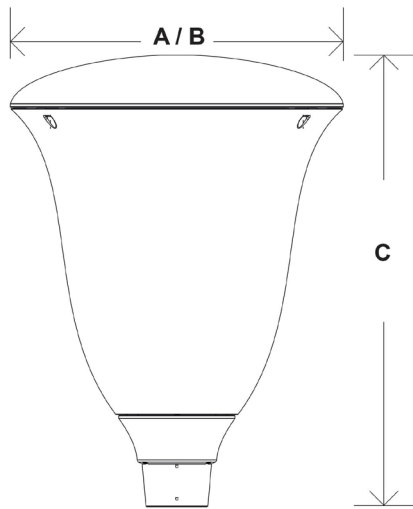
Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Warm White 727		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 822		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Neutral White 740		Power consumption (W)		Luminaire efficacy (lm/W)	Photometry
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Up to	
HAPILED	16	200	900	1300	1000	1400	700	1000	900	1300	1100	1500	11	11	136	LENSO FLEX 2
	16	300	1400	1800	1500	2000	1100	1400	1400	1800	1600	2100	15.8	15.8	133	LENSO FLEX 2
	16	400	1800	2400	2000	2700	1400	1900	1800	2400	2100	2700	20.7	20.7	130	LENSO FLEX 2
	16	500	2200	2900	2400	3200	1700	2300	2200	2900	2500	3300	25.7	25.7	128	LENSO FLEX 2
	16	600	2500	3400	2800	3700	2000	2700	2500	3400	2900	3900	30.8	30.8	127	LENSO FLEX 2
	16	700	2900	3800	3200	4200	2200	3000	2900	3800	3300	4400	36.2	36.2	122	LENSO FLEX 2
	24	200	1400	1800	1600	2100	1100	1500	1400	1800	1600	2100	16	16	131	LENSO FLEX 2
	24	300	2100	2700	2300	3000	1600	2100	2100	2700	2400	3100	23.1	23.1	134	LENSO FLEX 2
	24	400	2700	3500	3000	3900	2100	2700	2700	3500	3100	4000	30.4	30.4	132	LENSO FLEX 2
	24	500	3300	4200	3600	4700	2600	3300	3300	4200	3800	4900	38.1	38.1	129	LENSO FLEX 2
	24	590	3800	4800	4200	5400	3000	3800	3800	4800	4300	5600	44.5	44.5	126	LENSO FLEX 2
	24	600	3800	4900	4200	5500	3000	3900	3800	4900	4400	5700	47.5	47.5	120	LENSO FLEX 2
	24	700	4300	5500	4800	6200	3400	4400	4300	5500	5000	6400	55.5	55.5	115	LENSO FLEX 2
	32	200	1900	2500	2100	2800	1500	2000	1900	2500	2200	2900	21.4	21.4	136	LENSO FLEX 2
	32	300	2800	3600	3100	4000	2200	2800	2800	3600	3200	4200	30.9	30.9	136	LENSO FLEX 2
	32	400	3600	4700	4000	5200	2800	3700	3600	4700	4200	5400	41	41	132	LENSO FLEX 2
	32	450	4000	5200	4500	5700	3200	4100	4000	5200	4600	5900	46	46	128	LENSO FLEX 2
	32	500	4400	5600	4900	6300	3500	4500	4400	5600	5000	6500	51.5	51.5	126	LENSO FLEX 2
	48	200	3600	3800	4000	4200	2900	3000	3600	3800	4200	4300	30.6	30.6	141	LENSO FLEX 2
	48	300	5200	5400	5800	6100	4100	4300	5200	5400	6000	6300	45	45	140	LENSO FLEX 2
	48	400	6800	7000	7500	7800	5400	5500	6800	7000	7800	8100	60	60	135	LENSO FLEX 2
	48	500	8200	8500	9100	9400	6500	6700	8200	8500	9400	9800	75	75	131	LENSO FLEX 2

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

Schréder

5068 AS
LENSO FLEX™ 2

5068 SY
LENSO FLEX™ 2

5096
LENSO FLEX™ 2

5096 AS
LENSO FLEX™ 2

5096 SY
LENSO FLEX™ 2

5098 AS
LENSO FLEX™ 2

5098 SY
LENSO FLEX™ 2

5102 SY LF
LENSO FLEX™ 2

5112 AS
LENSO FLEX™ 2

5112 AS BL
LENSO FLEX™ 2

5112 SY
LENSO FLEX™ 2

5117 AS
LENSO FLEX™ 2

5117 AS LF
LENSO FLEX™ 2

5117 SY
LENSO FLEX™ 2

5117 SY LF
LENSO FLEX™ 2

5119 AS
LENSO FLEX™ 2

5119 AS BL
LENSO FLEX™ 2

5119 SY
LENSO FLEX™ 2

5120 AS

LENSO FLEX™ 2

5120 AS BL

LENSO FLEX™ 2

5120 AS LF

LENSO FLEX™ 2

5121 AS

LENSO FLEX™ 2

5121 AS BL

LENSO FLEX™ 2

5121 SY

LENSO FLEX™ 2

5138 AS LF

LENSO FLEX™ 2

5138 SY LF

LENSO FLEX™ 2