

Kio LED



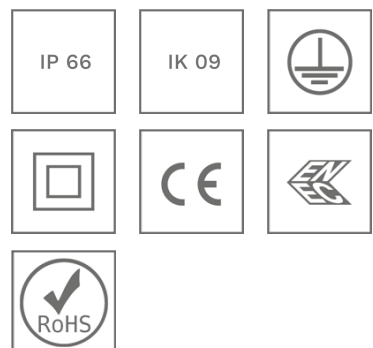
Designer : Grandesign



Elegance, comfort, creation of ambiance and performance

The clean and fluid lines of the Kio LED luminaire adapt to various urban landscapes such as parks, squares, gardens and residential areas. The Kio LED combines the energy efficiency of LED technology with the photometric performance of the LensoFlex®2 concept developed by Schröder.

This luminaire offers photometric efficiency with visual comfort for the creation of ambiance. It is available with multiple light distributions that provide excellent photometric performance. The design of the Kio LED luminaire guarantees an IP 66 tightness level.



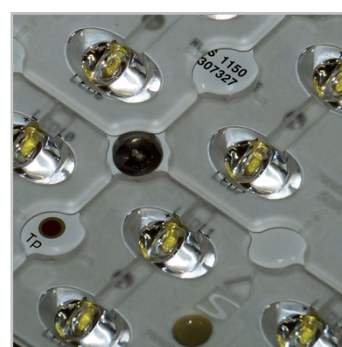
Concept

The materials used for Kio LED are of excellent quality: the base and cover are in high-pressure die-cast aluminium while the protector is composed of polycarbonate. Kio LED is available in two versions: direct and comfort. In the direct version, the light from the LEDs is emitted directly through a transparent or methacrylate protector.

In the Comfort version, an internal diffuser provides a softer light for high visual comfort with reduced glare. The Kio LED luminaires have been designed to fulfil the FutureProof concept. Both the photometric engine and the electrical power supply can be replaced to take advantage of any future technological developments. Kio LED offers slip-over mounting onto a Ø60mm spigot.



Kio LED can incorporate various control and dimming options.



Kio LED is available with a wide range of LensoFlex®2 optics.

Types of application

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

Key advantages

- LensoFlex®2 : high-performance photometry adapted to various applications
- Visual comfort
- Creation of ambiance
- Limited maintenance
- FutureProof: easy replacement of the photometric engine and electronic assembly



This luminaire offers slip-over mounting onto a Ø60mm spigot.



Kio LED is available in two versions: direct and comfort (high visual comfort)



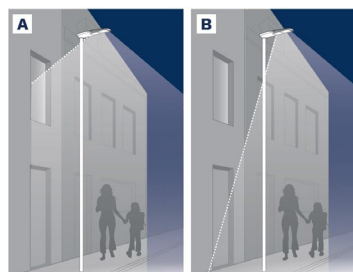
LensoFlex®2

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. The proven LensoFlex®2 concept includes a glass protector to seal the LEDs and lenses into the luminaire body.



Back Light control

As an option, the LensoFlex®2 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.

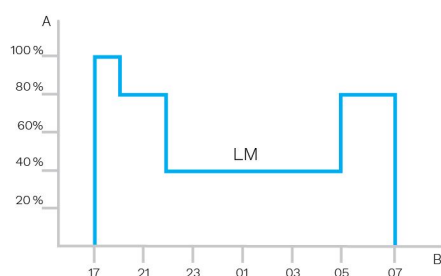


A. Without Back Light control | B. With Back Light control



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.

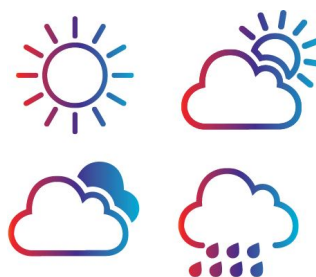


A. Performance | B. Time



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 night fall 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 parameters 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.



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.

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
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 black 200 sanded
Tightness level	IP 66
Impact resistance	IK 09
Vibration test	Compliant with modified IEC 68-2-6 (0.5G)

· 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
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· 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 61547 / EN 61000-4-2, -3, -4, -5, -6, -8, -11
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Photocell, Remote management
Socket option(s)	NEMA 7-pin (optional)
Associated control system(s)	Owlet Nightshift Owlet IoT
Sensor	PIR (optional)

OPTICAL INFORMATION

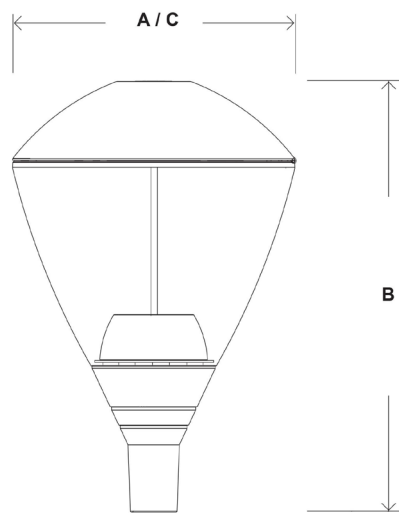
LED colour temperature	2700K (Warm White) 3000K (Warm White) 4000K (Neutral White)
Colour rendering index (CRI)	>70 (Warm White) >80 (Warm White) >70 (Neutral White)
Upward Light Output Ratio (ULOR)	<5%

· ULOR may be different according to the configuration. Please consult us.

LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90
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DIMENSIONS AND MOUNTING	
AxBxC (mm inch)	460x703x460 18.1x27.7x18.1
Weight (kg lbs)	8.2 18.0
Aerodynamic resistance (CxS)	0.08
Mounting possibilities	Post-top slip-over – Ø60mm





			Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 730		Luminaire output flux (lm) Warm White 830		Luminaire output flux (lm) Warm White 727		Power consumption (W)	Luminaire efficacy (lm/W)	
	Number of LEDs	Current (mA)	Min	Max	Min	Max	Min	Max	Min	Max		Up to	Photometry
Kio LED	8	350	800	1200	800	1200	700	1000	700	1000	9.7	124	
	8	500	1200	1600	1200	1600	1000	1400	1000	1400	13.6	125	
	8	700	1500	2100	1500	2100	1300	1800	1400	1900	19.1	115	
	16	350	1600	2300	1600	2300	1400	2000	1500	2100	18.2	137	
	16	500	2200	3200	2200	3200	1900	2700	2000	2800	25.7	128	
	16	700	2900	4100	2900	4100	2500	3500	2600	3700	36.2	119	
	24	350	2500	3500	2500	3500	2100	3000	2200	3200	26.8	138	
	24	500	3400	4800	3400	4800	2800	4000	3000	4300	38.1	131	
	24	700	4400	6200	4400	6200	3700	5300	3900	5600	54	120	
	32	350	3300	4700	3300	4700	2800	4000	3000	4300	35.7	140	
	32	500	4500	6400	4500	6400	3800	5400	4000	5700	50	134	
	32	700	5900	8300	5900	8300	5000	7100	5300	7500	70	124	

Tolerance on LED flux is $\pm 7\%$ and on total luminaire power $\pm 5\%$

