

# Voltana



Designer : Thomas Coulbeaut



## The ultimate, cost-effective, performing family of luminaires that pays for itself

Voltana delivers sustainable solutions that dramatically reduce energy consumption and improve lighting levels with the lowest investment. The Voltana family is available with multiple lumen packages thanks to the various sizes, driving currents and numerous light distributions - from very narrow to extra wide - to light all rural and urban landscapes. This luminaire is designed for side-entry and post-top mounting and can be adapted on-site thanks to an incorporated inclination system to optimise the photometry. Voltana can be managed by several control systems. It can operate in a closed independent network with sensors or in a global network of a city through wireless communication.

IP 66	IK 08	
	CE	



## Concept

Voltana is composed of a high-pressure die-cast aluminium body and a fixation piece in steel with one or two fixation clamps. Voltana is equipped with LensoFlex®2 photometric engines, offering optimised photometrical performance with a minimum total cost of ownership. This highly efficient luminaire is available in five sizes to provide towns and cities with the ideal tool to improve lighting levels, generate energy savings, reduce their ecological footprint and bring aesthetic coherence.

Depending on the size of the model, Voltana incorporates different numbers of LEDs, from 6 to 32, to provide a wide range of lumen packages. This family of luminaires can be mounted using a standard side-entry clamp fixation for Ø42-60mm spigots. Thanks to an incorporated inclination system, the angle can be adjusted on-site.

As an option, universal fixation pieces are available for spigots from Ø42 to Ø76mm for post-top and side-entry mounting.



Precise on-site adjustment thanks to an incorporated inclination system



Voltana provides easy access for maintenance

## Types of application

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

## Key advantages

- Cost-effective and efficient lighting solution for a fast return on investment
- High performance with safety and comfort
- 5 sizes for flexibility
- IP 66 tightness level
- ThermiX® to withstand high temperatures
- Designed to incorporate the Owlet range of control solutions



The Voltana range is available with a wide range of LensoFlex®2 photometries

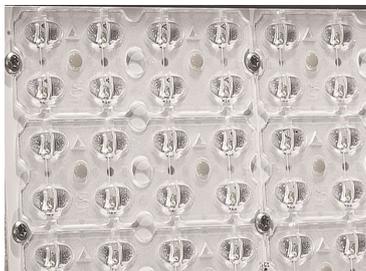


Voltana is available with universal fixation pieces for spigots ranging from Ø42 to Ø76mm (optional)



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.



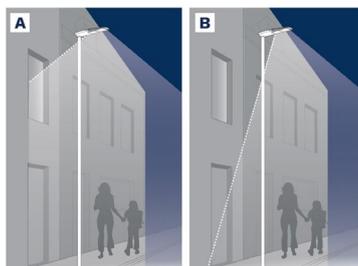
ProFlex™

The ProFlex™ photometric engine integrates the lenses into a polycarbonate protector. This integration increases the output and reduces the reflection inside the optical unit. The polycarbonate used for the ProFlex™ photometric engine offers essential characteristics such as high optical clarity for a superior light transmission, better impact resistance compared to glass and a long life span with UV-stabilisation treatment. The ProFlex™ concept enables a compact design with a thin optical compartment. It provides extensive light distributions so that the spacing between the luminaires can be increased.



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.

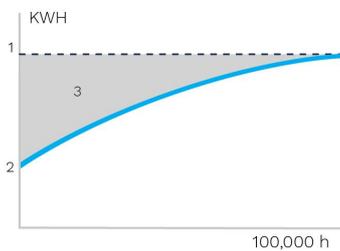


A. Without Back Light control | B. With Back Light control



### Constant Light Output (CLO)

This system compensates for the depreciation of luminous flux to avoid excess lighting at the beginning of the installation's service life. Luminous depreciation over time must be taken into account to ensure a predefined lighting level during the luminaire's useful life. Without a CLO feature, this simply means increasing the initial power upon installation in order to make up for luminous depreciation. By precisely controlling the luminous flux, the energy needed to reach the required level can be maintained throughout the luminaire's life.

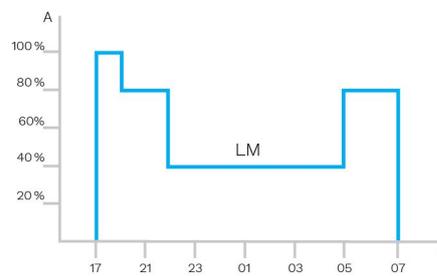


1. Standard lighting level | 2. LED lighting consumption with CLO | 3. Energy savings



### 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

# 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.

## GENERAL INFORMATION

Recommended installation height	4m to 12m   13' to 39'
FutureProof	Easy replacement of the photometric engine and electronic assembly on-site
Driver included	Yes
CE Mark	Yes
ENEC certified	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 Polycarbonate
Protector	Tempered glass Polycarbonate
Housing finish	Polyester powder coating
Standard colour(s)	RAL 7038
Tightness level	IP 66
Impact resistance	IK 08
Vibration test	Compliant with ANSI C 136-31 standard, 3G load Compliant with modified IEC 68-2-6 (0.5G)
Access for maintenance	By loosening screws on the bottom cover

· Any other RAL or AKZO colour upon request

· Polycarbonate (Proflex™) protector only for 6 LED version of Voltana 0

## OPERATING CONDITIONS

Operating temperature range (Ta)	-30 °C up to +50 °C / -22 °F up to 122 °F with wind effect
----------------------------------	--

· 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	Bi-power, Custom dimming profile, Remote management
Socket option(s)	NEMA 7-pin (optional)
Associated control system(s)	Owlet Nightshift Owlet IoT

· 7-pin Nema socket only available for Voltana 2-3-4

## OPTICAL INFORMATION

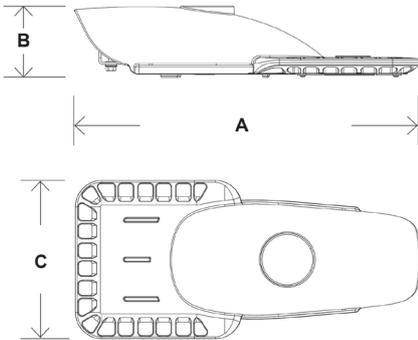
LED colour temperature	3000K (Warm White) 4000K (Neutral White)
Colour rendering index (CRI)	>70 (Warm White) >80 (Warm White) >70 (Neutral White)
Upward Light Output Ratio (ULOR)	0%

## LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L80
--------------------	----------------

## DIMENSIONS AND MOUNTING

AxBxC (mm   inch)	VOLTANA 0 - 416x91x156   16.4x3.6x6.1 VOLTANA 1 - 501x87x181   19.7x3.4x7.1 VOLTANA 2 - 518x108.5x240   20.4x4.3x9.4 VOLTANA 3 - 641x111x240   25.2x4.4x9.4 VOLTANA 4 - 555x112x380   21.9x4.4x15.0 VOLTANA 5 - 705x109x480   27.8x4.3x18.9
Weight (kg   lbs)	VOLTANA 0 - 2.6   5.7 VOLTANA 1 - 3.5   7.7 VOLTANA 2 - 4.6   10.1 VOLTANA 3 - 5.6   12.3 VOLTANA 4 - 7.5   16.5 VOLTANA 5 - 12.2   26.8
Aerodynamic resistance (CxS)	VOLTANA 0 - 0.01 VOLTANA 1 - 0.02 VOLTANA 2 - 0.02 VOLTANA 3 - 0.02 VOLTANA 4 - 0.03 VOLTANA 5 - 0.04
Mounting possibilities	Side-entry slip-over – Ø42mm Side-entry slip-over – Ø48mm Side-entry slip-over – Ø60mm Post-top slip-over – Ø42mm Post-top slip-over – Ø48mm Post-top slip-over – Ø60mm Post-top slip-over – Ø76mm





Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	
			Min	Max	Min	Max	Min	Max	Up to	Photometry
VOLTANA 0	6	350	800	800	700	700	7.8	8	103	
	6	500	1100	1100	1000	1000	10.7	11	103	
	6	700	1400	1400	1300	1300	15	15.6	93	
	6	1000	1900	1900	1700	1700	21.9	22.5	87	
	8	350	800	1000	800	900	10	10.1	100	
	8	500	1100	1400	1000	1300	13.9	14.1	101	
	8	700	1500	1900	1400	1700	19.5	20.1	97	
	8	1000	2000	2400	1800	2200	29.4	30.6	82	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	
			Min	Max	Min	Max	Min	Max	Up to	Photometry
VOLTANA 1	8	350	900	1100	800	1000	10.1	10.6	109	
	8	500	1200	1500	1100	1300	14.1	14.5	106	
	8	700	1600	1900	1400	1800	20.1	20.2	95	
	8	1000	2100	2500	1900	2300	29.4	30.6	85	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	
			Min	Max	Min	Max	Min	Max	Up to	Photometry
VOLTANA 2	16	350	2300	2400	2000	2100	18.9	21.7	127	
	16	350	1800	2200	1600	2000	18.9	19.4	116	
	16	500	3200	3300	2800	2900	26.7	28.8	124	
	16	500	2400	3000	2200	2700	27.1	28.8	111	
	16	700	4400	4500	3800	4000	37.4	40	120	
	16	700	3200	3900	2900	3500	38.3	40.5	102	
	16	1000	5900	6100	5200	5400	52	54	117	
	16	1000	4200	5100	3800	4700	58	58	88	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	
			Min	Max	Min	Max	Min	Max	Up to	Photometry
VOLTANA 3	24	350	3500	3600	3100	3200	27.5	27.5	131	
	24	350	2700	3300	2500	3000	27.1	27.4	122	
	24	500	4900	5000	4300	4400	39.3	39.3	127	
	24	500	3600	4500	3300	4100	39.1	39.4	115	
	24	700	6600	6800	5800	6000	55.5	55.5	123	
	24	700	4800	5900	4300	5300	56	56.5	105	
	24	1000	9000	9200	7900	8100	79	79	116	
	24	1000	6100	7500	5600	6800	82	85	91	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	
			Min	Max	Min	Max	Min	Max	Up to	Photometry
VOLTANA 4	32	350	4800	5000	4200	4300	35.7	36.6	140	
	32	350	3700	4500	3400	4100	35.7	36.5	126	
	32	500	6800	6900	5900	6100	51.5	52	134	
	32	500	5100	6100	4600	5500	51.5	52	118	
	32	700	9100	9300	8000	8200	73	73	127	
	32	700	6600	7900	6000	7200	74	74	107	
	32	1000	12400	12700	10900	11100	99	103	128	
	32	1000	8600	10300	7800	9400	106	111	97	

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



Luminaire	Number of LEDs	Current (mA)	Luminaire output flux (lm) Neutral White 740		Luminaire output flux (lm) Warm White 830		Power consumption (W)		Luminaire efficacy (lm/W)	
			Min	Max	Min	Max	Min	Max	Up to	Photometry
VOLTANA 5	64	350	9700	9900	8500	8700	70	70	141	
	64	350	7500	9000	6800	8300	70	70	129	
	64	500	13500	13800	11800	12100	101	101	137	
	64	500	10100	12200	9200	11200	101	101	121	
	64	700	18100	18600	15900	16300	143	143	130	
	64	700	13100	15900	12000	14500	145	145	110	
	64	1000	24500	25200	21500	22100	206	206	122	
	64	1000	16900	20500	15400	18700	222	222	92	

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

