

Teceo



Designer : Michel Tortel



Lighting in an efficient and sustainable manner

Teceo is a market benchmark recognised by independent bodies. This very successful luminaire has already enabled thousands of towns and cities to improve lighting levels, generate energy savings and reduce their ecological footprint.

With the S version which is particularly suited to low-height applications, the Teceo range offers optimised photometrical performance with a minimum total cost of ownership.

Thanks to its broad range of lumen packages, its impressive scope of light distributions and its various control options, Teceo provides the ideal solution for lighting numerous environments; from bike paths, squares and car parks to residential streets, urban roads, large avenues and motorways.

Designed for a versatile mounting with the same universal piece allowing both side-entry and post-top fixation on a spigot, Teceo is easy to combine with standard poles, refined brackets or wall brackets.



IP 66	IK 09	IK 08



Concept

Teceo is composed of three different parts in aluminium, with a top opening. The hinges of the top cover open 120° to provide access to the gear compartment.

Teceo can be fitted with LensoFlex® photometric engines, protected by a tempered glass.

The Teceo range offers optimised photometrical performance with a minimum total cost of ownership. This highly efficient luminaire is available in three sizes to offer towns and cities the ideal tool to improve lighting levels, generate energy savings and reduce their ecological footprint.

Teceo S, for up to 24 LEDs, has been designed for low-height applications such as residential streets, car parks and bike paths. Teceo 1, for up to 48 LEDs, is ideally suited to lighting urban roads and squares while Teceo 2 for up to 144 LEDs is perfect for large roads, avenues and motorways.

The complete range is available with four different universal fixation parts adapted for post-top and side-entry mounting on various spigots (Ø32mm with adapter, Ø42-48mm, Ø60mm and Ø76mm). The inclination angle can be adjusted on-site for both post-top (0 to 10°) and side-entry (0 to 15°) configurations.



The top opening provides access to the gear compartment for cabling and maintenance.



Teceo is available with a wide range of photometries.

Types of application

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

Key advantages

- Maximised savings in energy and maintenance costs
- A market benchmark recognised by independent bodies
- LensoFlex®2 offering high performance photometry, comfort and safety
- 3 sizes to provide the most accurate solutions for numerous road and urban applications
- Universal fixation adapted for side-entry and post-top mounting
- IoT ready: optional 7-pin NEMA socket



Teceo can be equipped with an optional PIR sensor for light-on-demand scenarios.



The Teceo range offers universal fixations for spigots ranging from Ø32 to Ø76mm.



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.



LensoFlex®3

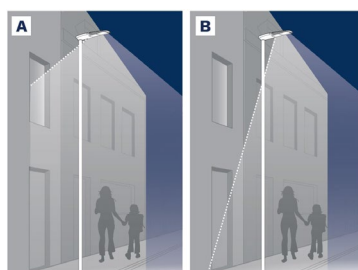
LensoFlex®3 uses lenses made of mouldable and optical-grade silicon offering superior transparency and excellent photothermal stability. This withstands high driving currents and delivers maximised lumen output over time. As silicon offers a higher thermal resistance compared to PMMA, temperature is not as critical for LensoFlex®3 engines. This offers two distinct advantages; LensoFlex®3 ensures enhanced performance in warm climates and enables a high driving current to be used to increase the lumen output and a higher lm/kg ratio. It also does not suffer from yellowing over time.



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.



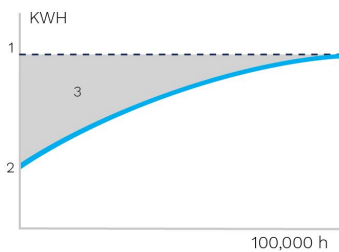
A. Without Back Light control | B. With Back Light control



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.



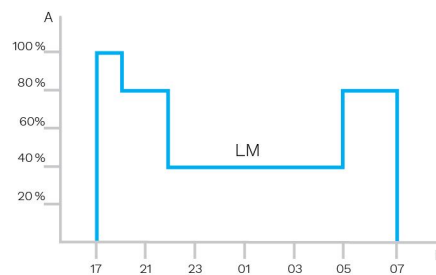
1. Standard lighting level | 2. LED lighting consumption with CLO | 3. Energy savings



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.

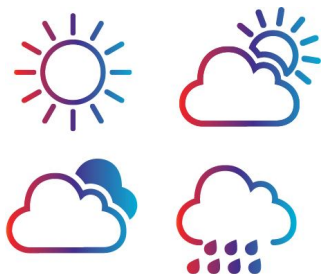


A. Performance | B. Time



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 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	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
ETL/UL certified	Yes
ROHS compliant	Yes
Testing standard	LM 79-08 (all measurements in ISO17025 accredited laboratory)

· Teceo S is not ETL/UL certified

HOUSING AND FINISH

Housing	Aluminium
Optic	PMMA Silicon
Protector	Tempered glass
Housing finish	Polyester powder coating
Standard colour(s)	AKZO grey 150 sanded
Tightness level	IP 66
Impact resistance	IK 08, IK 09
Vibration test	Compliant with ANSI 1.5G and 3G and 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

· IK may be different according to the size/configurations. Please consult us.

OPERATING CONDITIONS

Operating temperature range (Ta)	-30 °C up to +45 °C / -22 °F up to 113 °F
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· Depending on the luminaire configuration. For more details, please contact us.

ELECTRICAL INFORMATION

Electrical class	Class 1US, Class I EU, Class II EU
Nominal voltage	120-277V – 50-60Hz 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 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-11 / EN 61547
Control protocol(s)	1-10V, DALI
Control options	AmpDim, Bi-power, Custom dimming profile, Remote management
Socket	NEMA 7-pin (optional)
Associated control system(s)	Owlet Nightshift Owlet IoT
Sensor	PIR (optional)

· Bluetooth only available for Teceo S

OPTICAL INFORMATION

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

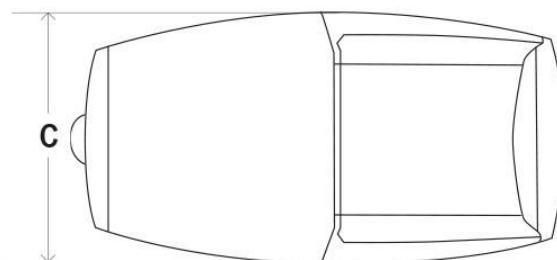
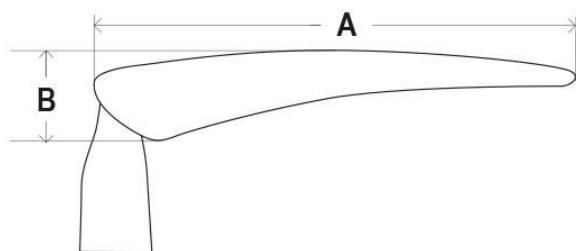
LIFETIME OF THE LEDS @ TQ 25°C

All configurations	100,000h - L90
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DIMENSIONS AND MOUNTING

AxBxC (mm inch)	TECEO S - 450x99x252 17.7x3.9x9.9 TECEO 1 - 607x113x318 23.9x4.4x12.5 TECEO 2 - 788x119x439 31.0x4.7x17.3
Weight (kg lbs)	TECEO S - 5.1 11.2 TECEO 1 - 9.6 21.1 TECEO 2 - 17.5 38.5
Aerodynamic resistance (CxS)	TECEO S - 0.05 TECEO 1 - 0.06 TECEO 2 - 0.08
Mounting possibilities	Side-entry slip-over – Ø32mm Side-entry slip-over – Ø42mm Side-entry slip-over – Ø48mm Side-entry slip-over – Ø60mm Side-entry penetrating – Ø60mm Post-top slip-over – Ø32mm Post-top slip-over – Ø42mm Post-top slip-over – Ø48mm Post-top slip-over – Ø60mm Post-top slip-over – Ø76mm Thylia pole type

· Thylia mounting only for Teceo S and Teceo 1





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 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	
TECEO S	8	350	800	1000	900	1200	800	1000	1000	1200	9.9	9.9	121	
	8	400	1000	1200	1100	1300	1000	1200	1100	1400	11.1	11.1	126	
	8	500	1200	1500	1300	1600	1200	1500	1400	1700	13.7	13.7	124	
	8	600	1400	1700	1600	1900	1400	1700	1600	2000	16.6	16.6	120	
	8	700	1600	2000	1800	2200	1600	2000	1800	2300	19.4	19.4	119	
	8	800	1800	2200	2000	2400	1800	2200	2000	2500	22.2	22.2	113	
	8	950	2000	2500	2300	2800	2000	2500	2300	2900	25.9	25.9	112	
	16	200	1000	1300	1200	1400	1000	1300	1200	1500	11	11	136	
	16	300	1500	1900	1700	2100	1500	1900	1800	2200	15.8	15.8	139	
	16	400	2000	2400	2200	2700	2000	2400	2300	2800	20.8	20.8	135	
	16	500	2400	3000	2700	3300	2400	3000	2800	3400	25.9	25.9	131	
	16	600	2800	3500	3100	3800	2800	3500	3200	4000	31.1	31.1	129	
	16	700	3200	3900	3600	4400	3200	3900	3700	4500	36.4	36.4	124	
	16	860	3800	4600	4200	5200	3800	4600	4400	5300	45	45	118	
	24	200	1600	1900	1800	2200	1600	1900	1800	2200	15.4	15.4	143	
	24	300	2300	2800	2600	3100	2300	2800	2700	3300	22.5	22.5	147	
	24	400	3000	3700	3300	4100	3000	3700	3400	4200	29.9	29.9	140	
	24	590	4200	5100	4700	5700	4200	5100	4800	5900	44.5	44.5	133	
	24	600	4200	5200	4700	5800	4200	5200	4900	6000	45.5	45.5	132	
	24	700	4800	5900	5400	6600	4800	5900	5500	6800	53.5	53.5	127	
24	800	5300	6500	6000	7300	5300	6500	6200	7500	61.5	61.5	122		
24	900	5800	7200	6500	8000	5800	7200	6700	8200	69.5	69.5	118		
24	1000	6300	7700	7000	8600	6300	7700	7300	8900	78	78	114		

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 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		
TECEO 1	8	350	800	1100	900	1200	800	1100	1000	1200	9.7	9.7	124	
	8	500	1200	1500	1300	1700	1200	1500	1400	1700	13.6	13.6	125	
	8	700	1600	2000	1800	2200	1600	2000	1900	2300	19.1	19.1	120	
	8	1000	2200	2700	2400	3000	2200	2700	2500	3100	29.2	29.2	106	
	16	350	1700	2200	1900	2400	1700	2200	2000	2500	18.2	18.2	137	
	16	500	2400	3000	2700	3300	2400	3000	2800	3400	25.7	25.7	132	
	16	700	3200	4000	3500	4400	3200	4000	3700	4600	36.2	36.2	127	
	24	350	2600	3300	2900	3700	2600	3300	3000	3800	26.8	26.8	142	
	24	500	3600	4500	4000	5000	3600	4500	4200	5200	38.1	38.1	136	
	24	700	4800	6000	5300	6600	4800	6000	5500	6900	53.5	53.5	129	
	32	350	3500	4400	3900	4900	3500	4400	4100	5100	34.8	34.8	147	
	32	500	4800	6000	5400	6700	4800	6000	5600	6900	49.5	49.5	139	
	32	700	6400	8000	7100	8900	6400	8000	7400	9200	70	70	131	
	40	350	4400	5500	4900	6100	4400	5500	5100	6300	43	43	147	
	40	500	6000	7500	6700	8400	6000	7500	7000	8700	61.5	61.5	141	
	40	700	8000	10000	8900	11100	8000	10000	9200	11500	87	87	132	
	48	350	5300	6600	5900	7400	5300	6600	6100	7600	51.5	51.5	148	
	48	500	7200	9000	8100	10000	7200	9000	8300	10400	73	73	142	
	48	700	9600	12000	10700	13300	9600	12000	11100	13800	104	104	133	
	48	700	-	-	-	-	10300	11100	12000	12900	105	105	123	
48	1000	-	-	-	-	13700	14700	16000	17100	151	151	113		

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			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		
TECEO 2	56	350	6200	7500	7000	8300	6200	7500	7200	8600	59.5	59.5	145	
	56	500	8500	10200	9500	11300	8500	10200	9800	11700	86	86	136	
	56	700	11300	13500	12600	15100	11300	13500	13000	15600	121	121	129	
	64	350	7100	8500	8000	9500	7100	8500	8200	9800	67.5	67.5	145	
	64	500	9700	11600	10800	12900	9700	11600	11200	13400	97	97	138	
	64	700	12700	15100	14100	16900	12700	15100	14600	17400	138	138	126	
	72	350	8000	9600	9000	10700	8000	9600	9300	11100	76	76	146	
	72	500	10900	13100	12200	14600	10900	13100	12600	15100	109	109	139	
	72	700	14300	17000	15900	19000	14300	17000	16400	19600	154	154	127	
	80	350	8900	10700	10000	11900	8900	10700	10300	12300	84	84	146	
	80	500	12200	14500	13500	16200	12200	14500	14000	16700	121	121	138	
	80	700	15800	18900	17600	21100	15800	18900	18200	21800	174	174	125	
	88	350	9800	11800	11000	13100	9800	11800	11300	13500	93	93	145	
	88	500	13400	16000	14900	17800	13400	16000	15400	18400	133	133	138	
	88	700	17400	20800	19400	23200	17400	20800	20100	24000	192	192	125	
	96	350	10700	12800	12000	14300	10700	12800	12400	14800	103	103	144	
	96	500	14600	17400	16300	19400	14600	17400	16800	20100	148	148	136	
	96	700	19000	22700	21200	25300	19000	22700	21900	26200	208	208	126	

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



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			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		
TECEO 2	104	350	11600	13900	13000	15500	11600	13900	13400	16000	111	111	144	
	104	500	15800	18900	17600	21100	15800	18900	18200	21800	160	160	136	
	104	700	20700	24700	23000	27500	20700	24700	23800	28400	224	224	127	
	112	350	12500	15000	14000	16700	12500	15000	14400	17200	119	119	145	
	112	500	17000	20400	19000	22700	17000	20400	19600	23400	172	172	136	
	112	700	22200	26500	24700	29500	22200	26500	25600	30500	242	242	126	
	120	350	13400	16000	15000	17900	13400	16000	15500	18500	127	127	146	
	120	500	18300	21800	20300	24300	18300	21800	21000	25100	184	184	136	
	120	700	23800	28400	26500	31600	23800	28400	27400	32700	258	258	127	
	128	350	14300	17100	16000	19100	14300	17100	16500	19700	135	135	146	
	128	500	19500	23300	21700	25900	19500	23300	22400	26800	194	194	138	
	128	700	25400	30300	28300	33800	25400	30300	29200	34900	276	276	126	
	136	350	15200	18200	17000	20300	15200	18200	17500	20900	144	144	145	
	136	500	20700	24700	23100	27500	20700	24700	23800	28500	206	206	138	
	144	350	16100	19300	18000	21500	16100	19300	18600	22200	152	152	146	
	144	500	21900	26200	24400	29200	21900	26200	25300	30200	218	218	139	
144	500	-	-	-	-	24300	25200	28300	29400	220	220	134		

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