

TECEO



owlet



Schréder



## CHARACTERISTICS – LUMINAIRES

Optical compartment tightness level:	IP 66 <sup>(*)</sup>
Control gear tightness level:	IP 66 <sup>(*)</sup>
Impact resistance (glass):	IK 08 <sup>(**)</sup>
Aerodynamic resistance (CxS):	
	Teceo 1 0.060m <sup>2</sup>
	Teceo 2 0.064m <sup>2</sup>
Nominal voltage:	EU: 220-240V - 50-60Hz
	US: 120-277V - 50-60Hz
Electrical class:	EU: I or II <sup>(*)</sup>
	US: 1
Weight (total):	Teceo 1 9.6kg / 21.16lbs
	Teceo 2 17.5kg / 38.58lbs
Installation height:	Teceo 1 4 - 8m
	Teceo 2 6 - 12m

<sup>(\*)</sup> according to IEC - EN 60598

<sup>(\*\*)</sup> according to IEC - EN 62262

## KEY ADVANTAGES

- Maximised savings in energy and maintenance costs
- Right lighting through LensoFlex®2 offering high performance photometry, comfort and safety
- LED engines with flexible combinations of LED modules
- FutureProof: photometric engine and electronic assembly is easy to replace on-site
- ThermiX®: maintains performance over time
- Back Light Control (option): prevents intrusive light
- Durable and recyclable materials
- Surge protection 10kV

## LIGHTING IN AN EFFICIENT AND SUSTAINABLE MANNER

The Teceo range offers optimised photometrical performance with a minimum total cost of ownership. It offers towns and cities the ideal tool to improve lighting levels, generate energy savings and reduce their ecological footprint.

The Teceo range comes in two sizes.

The Teceo 1 for up to 48 LEDs is ideally suited to lighting residential streets, urban roads, bike paths and car parks, while the Teceo 2 for up to 144 LEDs is perfect for large roads, avenues and motorways.

It is equipped with the second generation LensoFlex®2 photometric engine which offers a high-performance photometry optimised for each specific application with minimum energy consumption.

The Teceo range offers flexible combinations of LED modules, a choice of currents and dimming options to further maximise energy savings and provide the most cost-effective solution.

A rear bracket version of the Teceo luminaire is available so that streets, side streets and large pavements can be lit using the same luminaire design.

The wall bracket allows for the lighting of narrow streets as well as any poorly lit areas.

Colour: AKZO light grey 150 sanded

## MAXIMUM ENERGY SAVINGS

A minimal total cost of ownership was the driving force behind the development of the Teceo range. It is equipped with LEDs and various dimming and remote management options for a dramatic reduction in energy consumption. It offers a very competitive alternative to luminaires equipped with traditional light sources such as high-pressure sodium lamps.

## LENSOFLEX®2

Teceo luminaires are equipped with second generation LensoFlex®2 photometric engines that have been specifically developed for lighting spaces where the well-being and safety of people using the environments are essential.

This system is based upon the addition principle of photometric distribution. Each LED is associated with a specific lens that generates the complete photometric distribution of the luminaire. It is the number of LEDs in combination with the driving current that determines the intensity level of the light distribution.

## PERFORMANCE AND FLEXIBILITY

The Teceo luminaires are equipped with photometric engines composed of modular quantities of LEDs so that they can offer a wide range of lumen packages. They can also be equipped with a variety of drivers and dimming options.

The Teceo luminaires can be adjusted on-site for optimal photometric performance. This flexibility ensures that the light distributions are specifically adapted to the real needs of the area to be lit.

## SMART LIGHTING

The Teceo luminaires can integrate the Owlet range of control solutions to operate either in stand-alone mode, in an autonomous network or an interoperable network. Dimming scenarios and light-on-demand features including sensors can adapt the lighting to the real needs of the place and the time to ensure safety and well-being in the most sustainable way.

## FUTUREPROOF

Using state-of-the-art technology, Teceo luminaires have been designed to fulfil the FutureProof concept. The photometric engine is IP 66 sealed to protect the LEDs and lenses from coming into contact with the outside environment and so maintain photometric performance over time.

The optical unit can be easily removed, allowing real on-site replacement at the end of its service life in order to take advantage of future technological developments. This easy and rapid procedure reduces maintenance costs and contributes to reducing the total cost of ownership.



## PHOTOMETRY

## TECEO 1

LENSOFLEX®2								Lifetime residual flux @ t <sub>a</sub> 25°C (**)
Colour temperature		Warm (3000K), neutral (4000K) and cool (5700K) white						
Number of LEDs		8 LEDs	16 LEDs	24 LEDs	32 LEDs	40 LEDs	48 LEDs	@100.000h
Current: 350mA	Luminaire flux range (lm)*	800 to 1100	1600 to 2200	2400 to 3300	3300 to 4500	4100 to 5600	4900 to 6700	90%
	Power consumption (W)	10	20	27	36	44	53	
	Solar version - 12V / 24V	-	✓	✓	✓	✓	✓	
Current: 500mA	Luminaire flux range (lm)*	1100 to 1500	2200 to 3000	3300 to 4600	4500 to 6100	5600 to 7700	6700 to 9200	
	Power consumption (W)	14	26	38	51	63	75	
	Solar version - 12V	-	✓	✓	✓	-	-	
	Solar version - 24V	-	✓	✓	✓	✓	✓	
Current: 700mA	Luminaire flux range (lm)*	1500 to 2000	2900 to 4000	4400 to 6000	5800 to 8100	7300 to 10100	8800 to 12900	
	Power consumption (W)	19	36	55	71	90	104 to 107	
	Solar version - 12V	-	✓	-	✓	-	-	
	Solar version - 24V	-	✓	-	✓	-	-	
Current: 1A	Luminaire flux range (lm)*	1900 to 2600	-	-	-	-	16000 to 17100	
	Power consumption (W)	29	-	-	-	-	150	

## TECEO 1 SOLAR: AT THE FOREFRONT OF SUSTAINABILITY

The Teceo 1 luminaire can take advantage of its very low power consumption to be supplied with solar energy to offer an even more sustainable lighting solution. The Teceo 1 solar version – equipped with a driver specifically designed for this application – provides high efficacy which enables the panel size and battery capacity to be reduced, thus minimising the total cost of ownership.

The Teceo 1 solar version is the perfect tool to answer energy efficiency concerns and to offer a performing LED lighting solution for off-grid applications.

The Teceo solar version range is suitable for both 12V and 24V batteries. It can provide a LED lumen package from 1,600 up to 9,200lm to meet the lighting needs of numerous applications such as car parks, bike paths, secondary roads, residential streets...



## TECEO 2

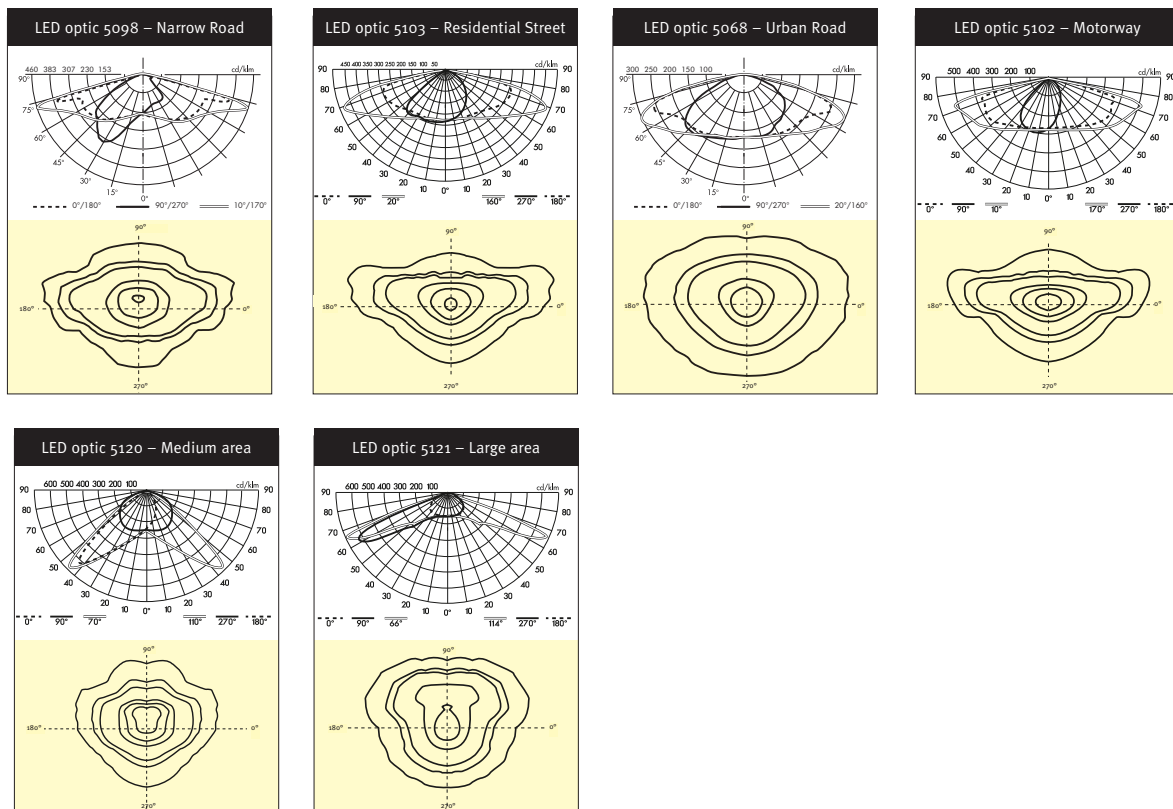
LENSOFLEX®2														Lifetime residual flux @ t <sub>q</sub> 25°C <sup>(**)</sup>
Colour temperature		Warm (3000K), neutral (4000K) and cool (5700K) white												
Number of LEDs		56 LEDs	64 LEDs	72 LEDs	80 LEDs	88 LEDs	96 LEDs	104 LEDs	112 LEDs	120 LEDs	128 LEDs	136 LEDs	144 LEDs	@100.000h
Current 350mA	Luminaire flux range (lm)*	6100 to 8000	7000 to 9200	7900 to 10300	8800 to 11500	9700 to 12600	10600 to 13800	11500 to 14900	12300 to 16100	13200 to 17200	14100 to 18400	15000 to 19500	15900 to 20700	90%
	Power consumption (W)	62	70	78	86	94	102	116	124	132	140	147	155	
Current 500mA	Luminaire flux range (lm)*	8200 to 10700	9400 to 12200	10500 to 13700	11700 to 15300	12900 to 16800	14100 to 18300	15200 to 19900	16400 to 21400	17600 to 22900	18800 to 24500	20000 to 27700	21100 to 29400	
	Power consumption (W)	87	99	111	122	134	146	163	174	183	198	206 to 210	217 to 221	
Current 700mA	Luminaire flux range (lm)*	10600 to 13800	12100 to 15800	13600 to 17800	15200 to 19800	16700 to 21800	18200 to 23700	19700 to 25700	21300 to 27700	22400 to 29200	23900 to 31100	-	-	
	Power consumption (W)	123	139	157	180	196	213	229	245	262	279	-	-	

(\*) The initial flux and power consumption of the luminaire are indicative values and valid for 25°C ambient temperature. The real flux output of the luminaire depends on environmental conditions (e.g. temperature) and may vary with specific configurations. Communicated values are subject to tolerances in technology. To check if this document refers to the latest information available, please visit [www.schreder.com](http://www.schreder.com)

(\*\*) In accordance with IES LM-80 - TM-21.



## LIGHT DISTRIBUTIONS

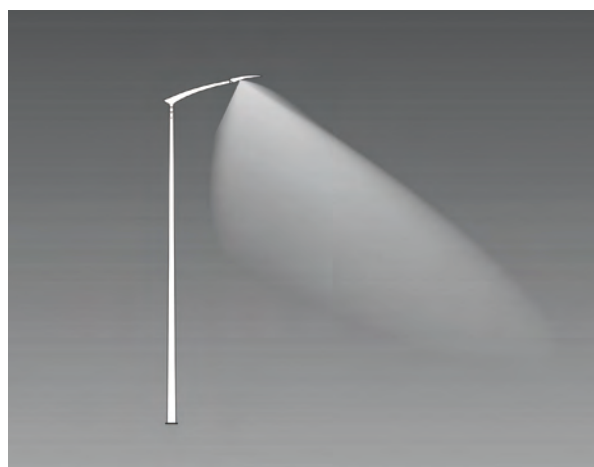


## BACK LIGHT CONTROL PREVENTING INTRUSIVE LIGHT

As an option, some versions of the Teceo can be equipped with a Back Light Control system. Thanks to an additional control plate inside the luminaire body, light spill from the back of the luminaire is minimised to avoid intrusive light on buildings.



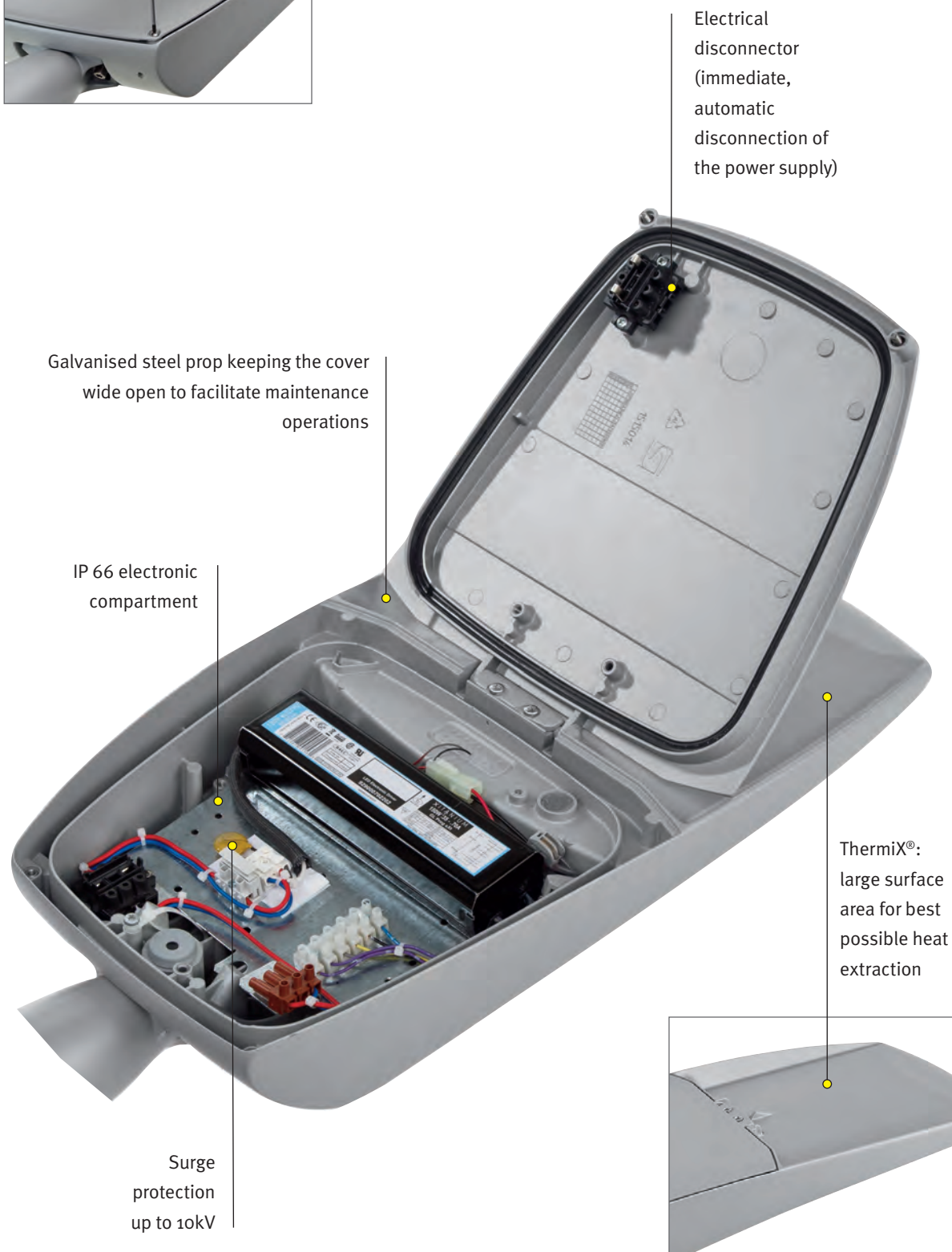
Light distribution without Back Light Control



Light distribution with Back Light Control



Direct access  
to gear and  
electronic  
compartment



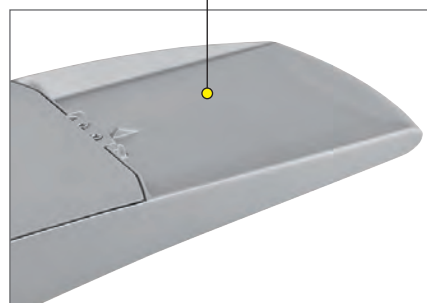
Electrical  
disconnect  
(immediate,  
automatic  
disconnection of  
the power supply)

Galvanised steel prop keeping the cover  
wide open to facilitate maintenance  
operations

IP 66 electronic  
compartment

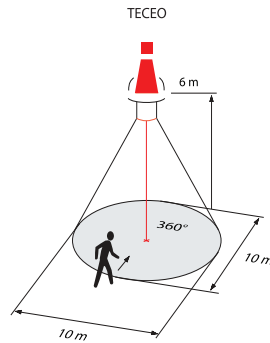
ThermiX®:  
large surface  
area for best  
possible heat  
extraction

Surge  
protection  
up to 10kV





Motion sensor unit (option)

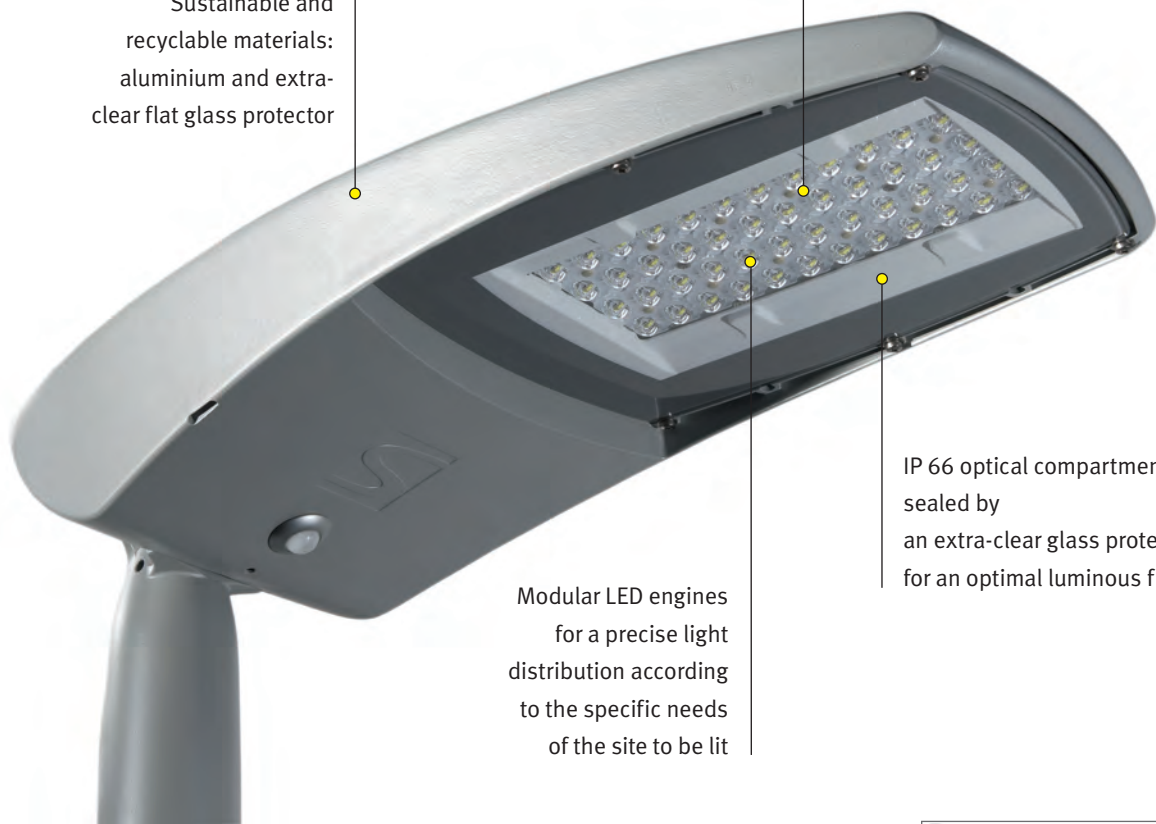


#### LensoFlex®2:

a photometric engine specifically dedicated to offering photometric flexibility and performance.

LEDs in neutral white 4000K (warm white and cool white are optional) equipped with Schröder developed lenses

Sustainable and recyclable materials: aluminium and extra-clear flat glass protector



IP 66 optical compartment sealed by an extra-clear glass protector for an optimal luminous flux

Modular LED engines for a precise light distribution according to the specific needs of the site to be lit

FutureProof photometric engine, easily removed and replaced on-site to take advantage of future technological developments (photo shows LEDSafe® variant)



Side-entry or post-top mounting  
Universal mounting piece allows precise adjustment on-site



## CASE STUDIES

Teceo luminaires demonstrate remarkable photometric performance.

The flexibility of the LensoFlex®2 photometric engine allows for multiple light distributions to respond better to the requirements of urban lighting.

Furthermore, the options for varying the number of LEDs allows for a precise adaptation of the nominal power of the luminaire according to the area that is to be lit.



- Optic LensoFlex®2 "Narrow road" 5098  
- For S classification according to CIE 115



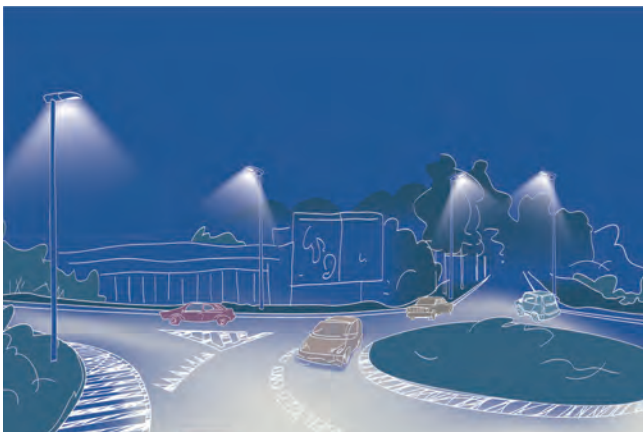
- Optic LensoFlex®2 "Residential street" 5103  
- For M4 classification according to CIE 115



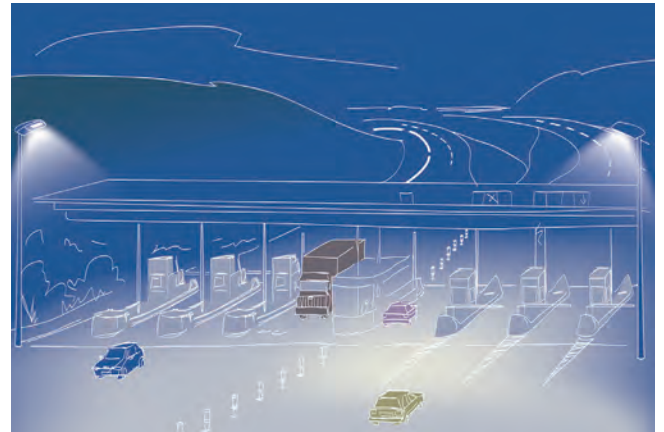
- Optic LensoFlex®2 "Urban road" 5068  
- For M3 classification according to CIE 115



- Optic LensoFlex®2 "Motorway" 5102  
- For M3 classification according to CIE 115



- Optic LensoFlex®2 "Medium area" 5120



- Optic LensoFlex®2 "Large area" 5121



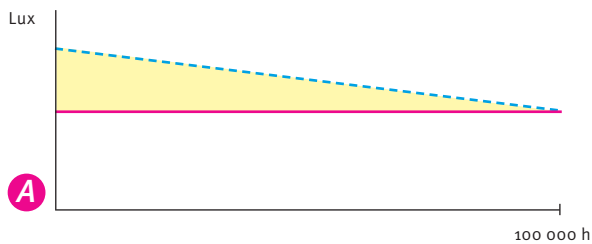
## MAINTAINING THE LUMINOUS FLUX OVER TIME

With a conventional solution, the depreciation of the luminous flux over time leads to excess lighting - and thus too much energy consumption - when the luminaires are installed so that the efficiency declines slowly to reach the minimum required level at the end of the installation's service life (graph A).

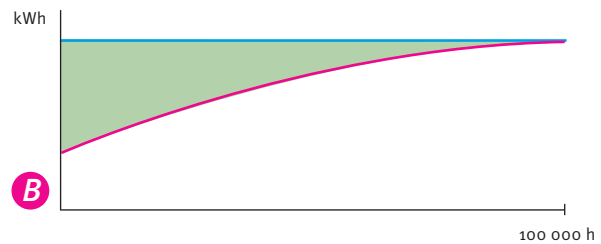
The Teceo luminaires work differently by operating with a constant luminous flux (Constant Light Output - CLO).

They control precisely and autonomously their energy needs during the luminaires' life cycle to provide the required level constantly - no more and no less – throughout the service life (graph B).

This can generate additional energy savings of up to 10% over the luminaire lifetime.



- Standard LED lighting level
- Lighting level required = LED lighting level solution with CLO
- Excess lighting



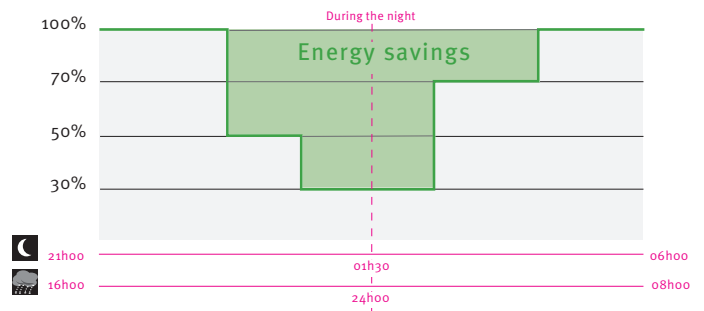
- Standard lighting consumption
- LED lighting consumption with CLO
- Energy savings

## VARIABLE INTENSITY (DIMMING) FOR EFFICIENT AND COMFORTABLE LIGHTING

The right lighting is adapting precisely the quantity of light according to the real needs at a specific time (depending on daylight and more importantly activity in the area).

Dimming systems can generate substantial energy savings.

The Teceo range can be equipped with different dimming and remote management systems.



## CASE STUDY



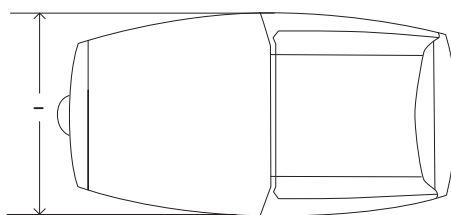
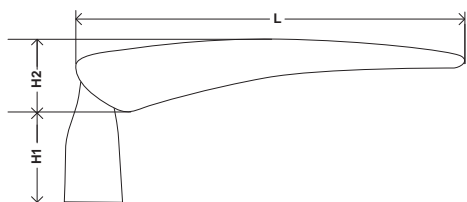
Teceo 1  
 LensoFlex®2 48 LEDs @350mA  
 4000K neutral white  
 53W  
 MF = 0.8  
 M5 - classified roadway according to CIE 115  
 $L_{ave} = 0.5 \text{ cd/m}^2$

By replacing the old luminaires equipped with 70W high-pressure sodium lamps the **power consumption has been reduced by 30%** to  $0.23 \text{ W/m}^2$  while maintaining the  $0.5 \text{ cd/m}^2$  required.

$\text{SLEEC-L} = 0.46 \text{ W} / (\text{m}^2 \cdot \text{cd/m}^2)$  following Rev. EN 13201 draft.

For 4,000 hours of use per year, for 1km of roadway, this corresponds to a consumption of less than 17kWh/day and emissions lower than  $7.9 \text{ kg eq CO}_2$  according to the average European equivalent of  $0.46 \text{ kg eq CO}_2/\text{kWh}$ .

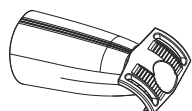
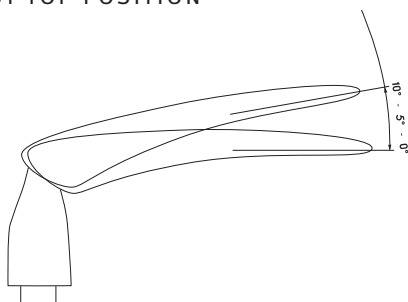
## DIMENSIONS



	Teceo 1	Teceo 2
W	318mm / 12.5"	439mm / 17.2"
L	607mm / 23.9"	788mm / 31"
H1	141mm / 5.5"	138mm / 5.4"
H2	113mm / 4.4"	119mm / 4.7"

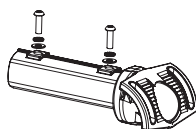
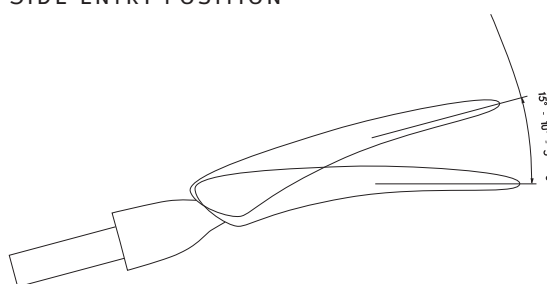
## MOUNTING

### POST-TOP POSITION

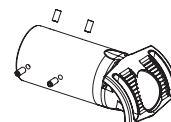


- Universal slip-over mounting onto a 42-60 or 76mm diameter spigot  
Suitable for ITO poles and brackets

### SIDE-ENTRY POSITION



- Into a 60mm diameter tube  
Suitable for Elysa poles and brackets

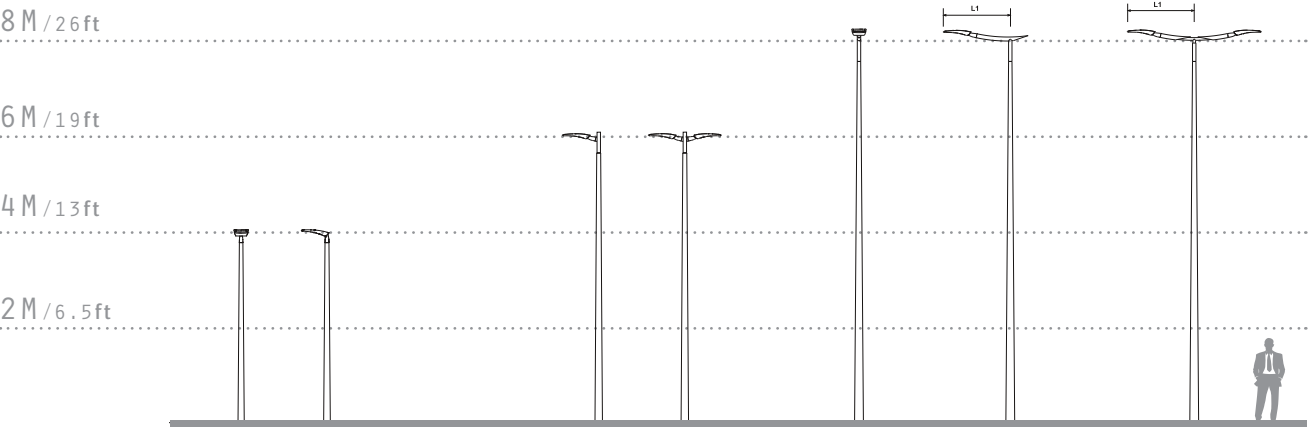


- Designed for Thylia poles

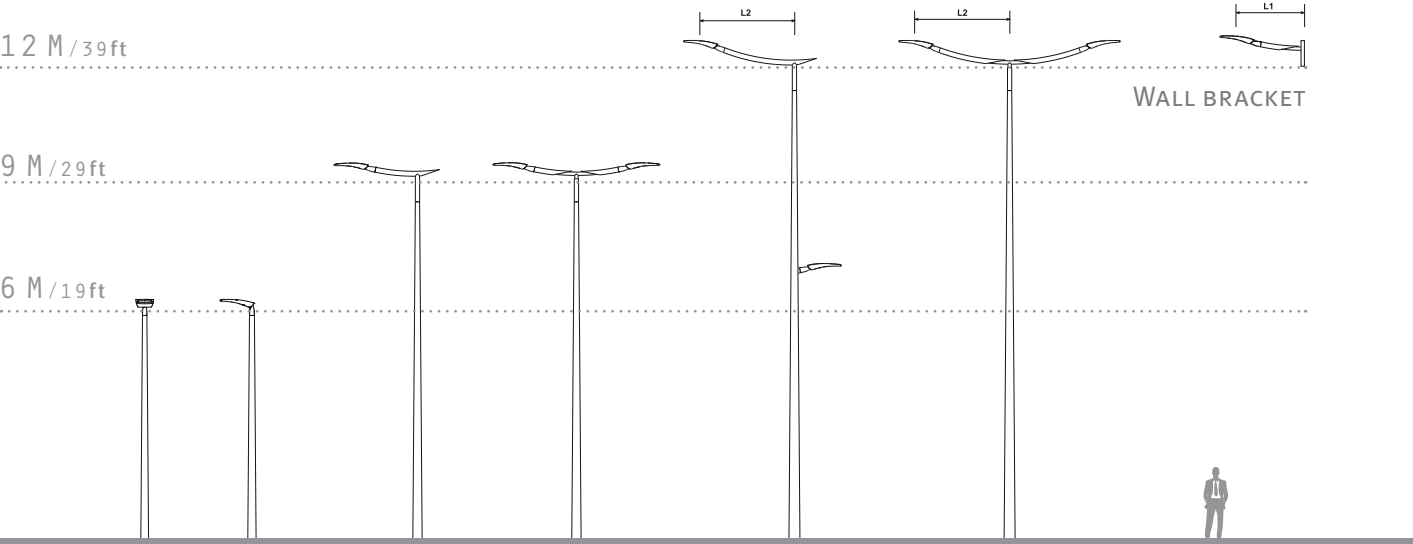


ITO POLES AND BRACKETS

ITO SMALL MODEL

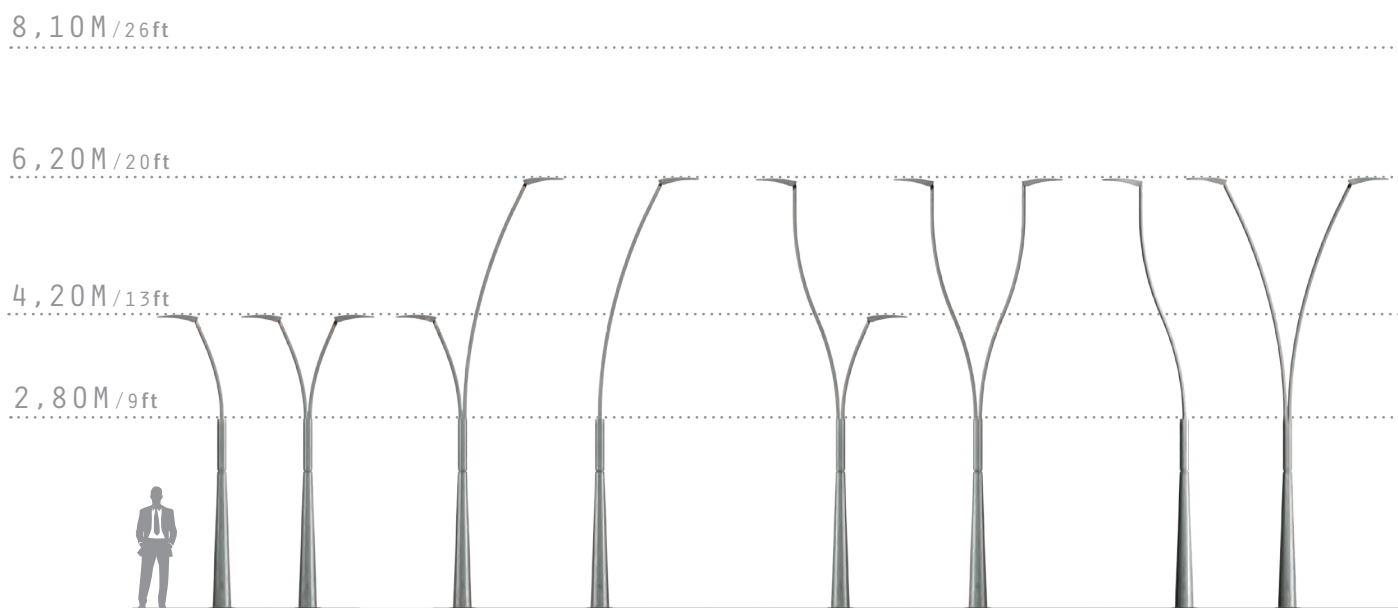


ITO LARGE MODEL

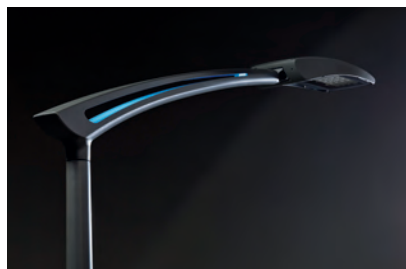
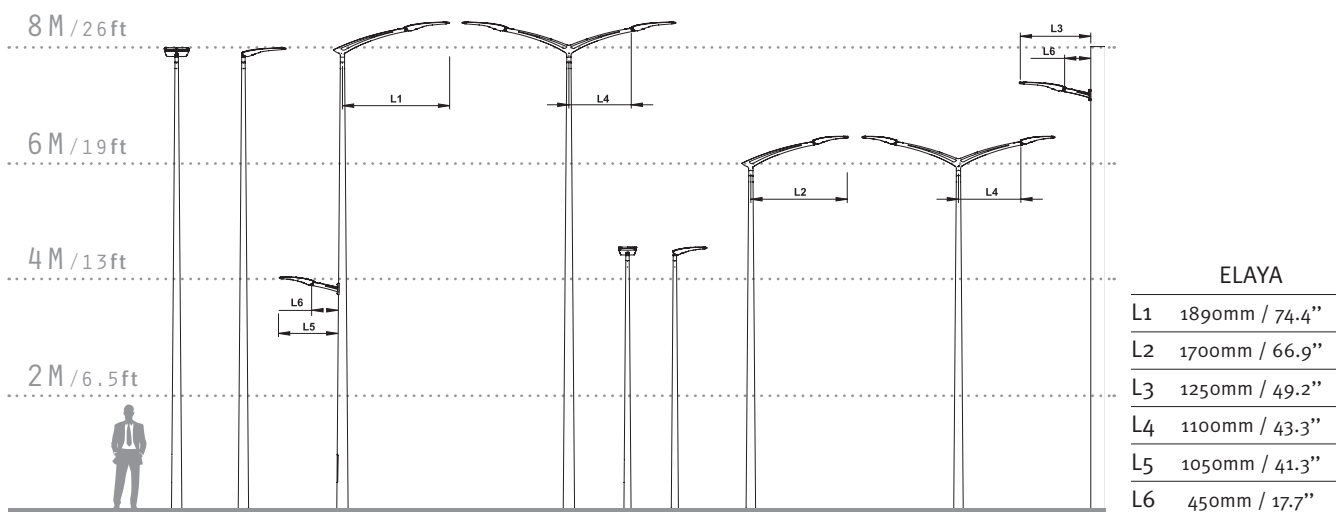


ITO	
L1	1200mm / 47.2"
L2	1680mm / 66.1"

## THYLIA POLES AND BRACKETS

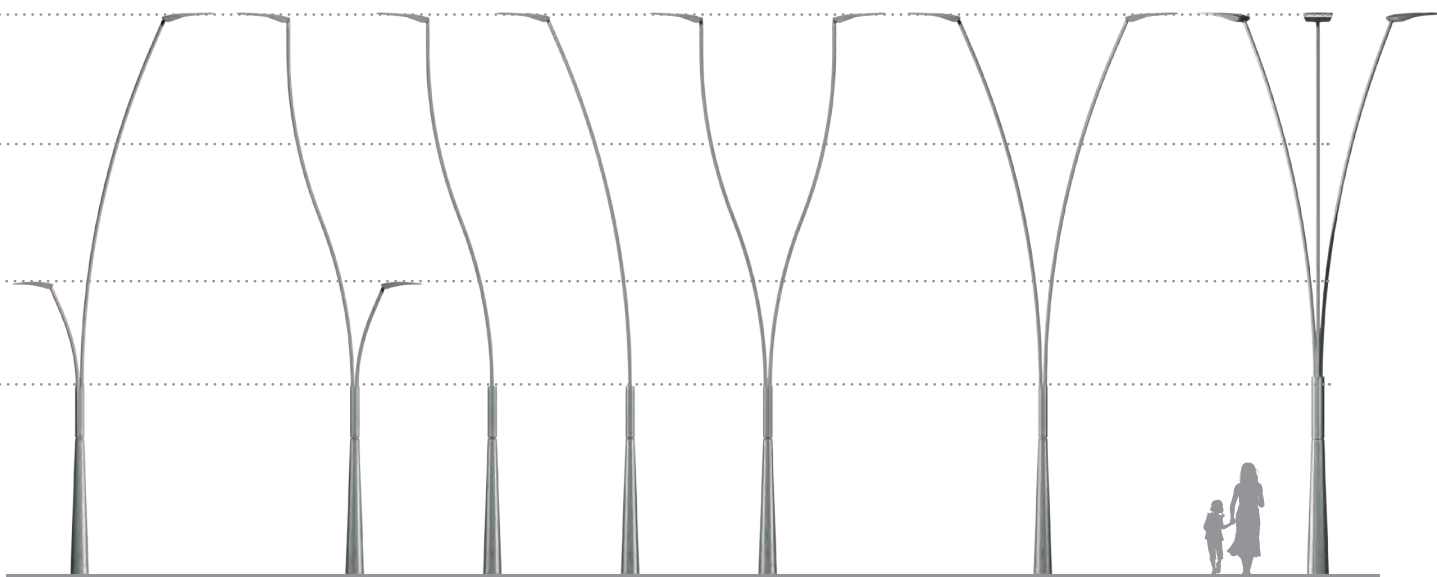


## ELAYA POLES AND BRACKETS



As an option, the Elaya bracket can be equipped with a static low-power LED for accent lighting, to create a distinctive identity.





			Economy	Performance	Premium
OPTICS					
LensoFlex®2	No. LEDs	Teceo 1: 16-24-...-48	●	●	●
		Teceo 2: 56-64-...-144	●	●	●
	Photometrical distributions	19	●	●	●
		Neutral White (4000K)	●	●	●
	CCT LED	Warm White (3000K)	○	○	○
		Cool White (5700K)	○	○	○
FutureProof			●	●	●
LEDSafe® module	Pre-installed		X	X	●
Protector	Glass	Extra-clear	●	●	●
		Self-cleaning	X	○	○
Embellishment plate			X	○	●
Back Light Control System			X	○	○
ELECTRICAL					
Power range	Driving current	350mA	●	○	○
		500mA	X	●	●
		700mA	X	○	○
Constant Light Output			X	○	○
Dimming/switching control	1-10V		X	○	○
	Bi-Power	50%	X	○	○
	Profile	custom	X	○	○
	Photo cell - Motion sensor (PIR)		X	○	○
	OWLET remote mgt.	LuCo	X	○	○
Electrical Class	Class II		●	●	●
	Class I - 1		○	○	○
Surge protection		10kV	●	●	●
Disconnecter		Upon opening	○	○	○
Solar	12/24V		X	○	○
MECHANICS					
Universal Mounting	ø 42-60mm	2M8 screws	●	●	●
		+ stainless steel bar	X	○	●
	ø 76mm	2M8 screws	●	●	●
		+ stainless steel bar	X	○	●
OTHERS					
Gear plate			X	○	○
Pre-cabled		custom length	○	○	○
Colour	Light grey	AKZO 150	●	●	●
	All RAL and AKZO		○	○	○

- included
- optional
- X not available



