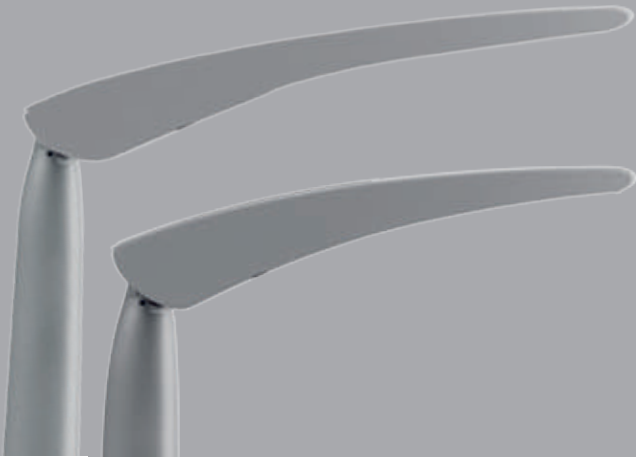


TECEO



Schröder





Design: Michel Tortel



CHARACTERISTICS – LUMINAIRES

Optical compartment tightness level:		IP 66 ^(*)
Control gear tightness level:		IP 66 ^(*)
Impact resistance (glass):		IK 08 ^(**)
Aerodynamic resistance (CxS):	Teceo 1	0.060m ²
	Teceo 2	0.064m ²
Nominal voltage:		230V - 50Hz
Electrical class:		I or II ^(*)
Weight (total):	Teceo 1	9.6kg
	Teceo 2	17.5kg
Installation height:	Teceo 1	4 - 8m
	Teceo 2	6 - 12m

^(*) according to IEC - EN 60598

^(**) 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 _a 25°C (**)
Number of LEDs	Neutral white (4000K)	16 LEDs	24 LEDs	32 LEDs	40 LEDs	48 LEDs	@100.000h
Current: 350mA	Nominal flux (lm)*	2400	3600	4800	6000	7200	90%
	Power consumption (W)	18	27	36	44	53	
	Solar version - 12V	✓	✓	✓	✓	✓	
	Solar version - 24V	✓	✓	✓	✓	✓	
Current: 500mA	Nominal flux (lm)*	3100	4700	6300	7900	9500	
	Power consumption (W)	26	38	51	63	75	
	Solar version - 12V	✓	✓	✓	-	-	
	Solar version - 24V	✓	✓	✓	✓	✓	
Current: 700mA	Nominal flux (lm)*	4000	6100	8100	10200	12200	80%
	Power consumption (W)	36	55	71	90	107	
	Solar version - 12V	✓	-	✓	-	-	
	Solar version - 24V	✓	-	✓	-	-	

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 2,200 up to 9,000lm 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 _a 25°C (**)	
Number of LEDs	Neutral white (4000K)	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	Nominal flux (lm)*	8400	9600	10800	12000	13200	14400	15600	16800	18000	19200	20400	21600	90%
	Power consumption (W)	62	70	78	86	94	102	116	124	132	140	147	155	
Current 500mA	Nominal flux (lm)*	11000	12600	14200	15800	17400	19000	20500	22100	23700	25300	26900	28500	
	Power consumption (W)	87	99	111	122	134	146	163	174	186	198	210	221	
Current 700mA	Nominal flux (lm)*	14200	16300	18300	20400	22400	24400	26500	28500	30600	32600	-	-	80%
	Power consumption (W)	123	139	163	180	196	213	229	245	262	279	-	-	

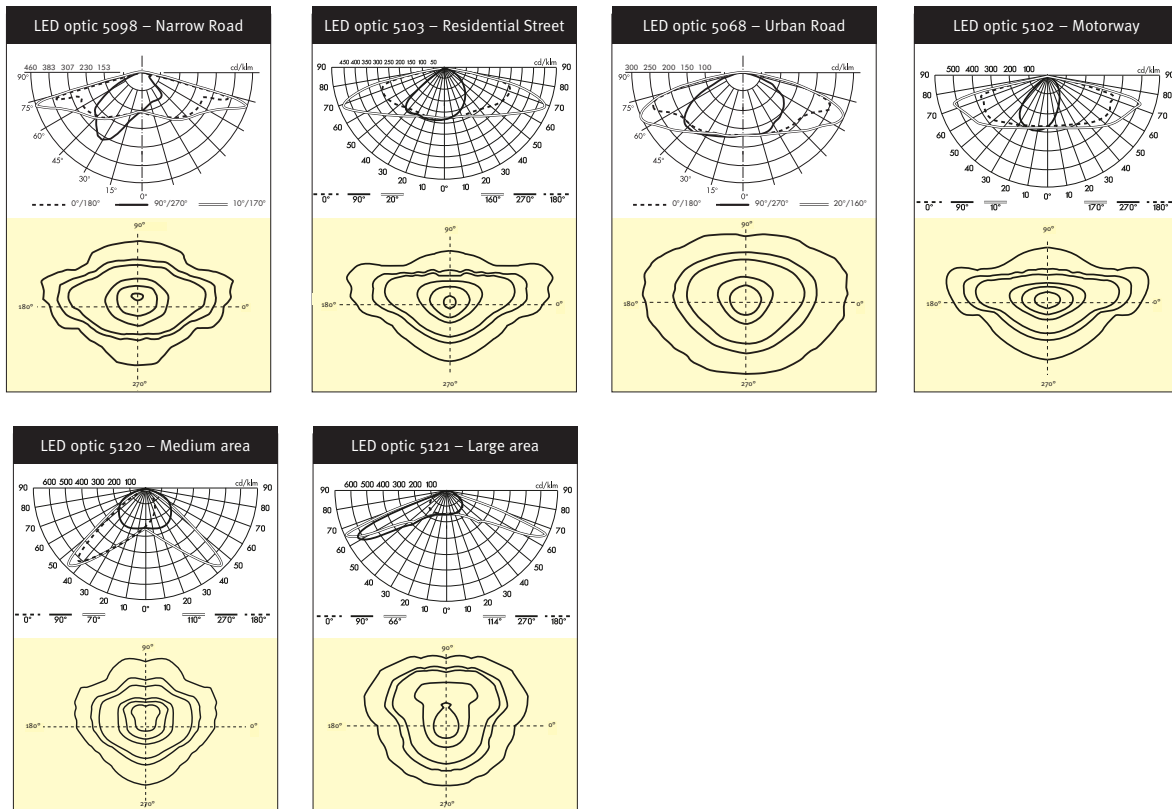
(*) The nominal flux is an indicative LED flux @ t_a 25°C based on LED manufacturer's data. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution) and the optical efficiency of luminaire.

Nominal flux depends on the type of LED in use and likely to change in accordance with the continuous and rapid developments in LED technology.

To follow the progress of the luminous efficiency of the LEDs used, please visit our website.

(**) 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.



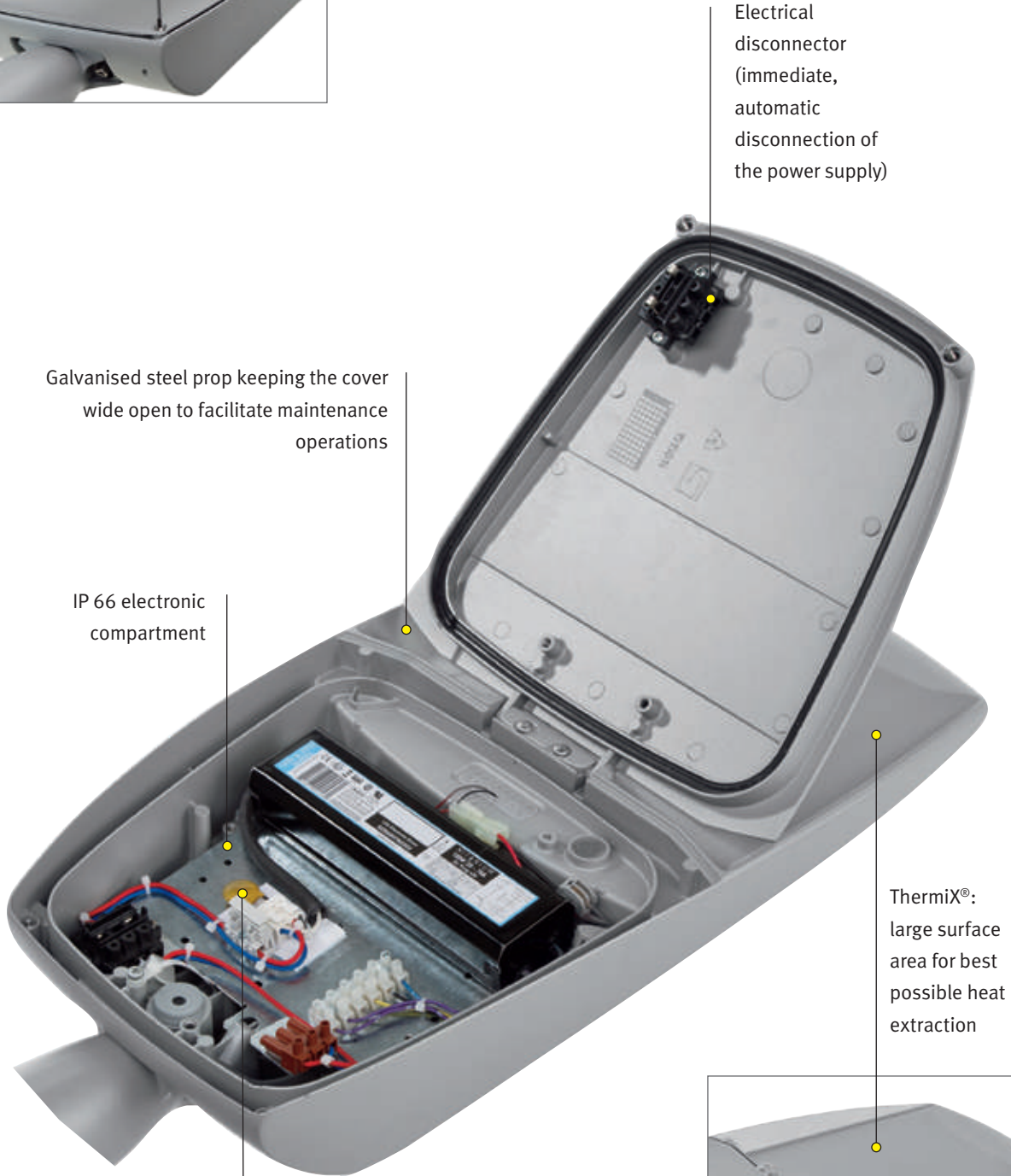
Light distribution without Back Light Control



Light distribution with Back Light Control



Direct access to gear and electronic compartment



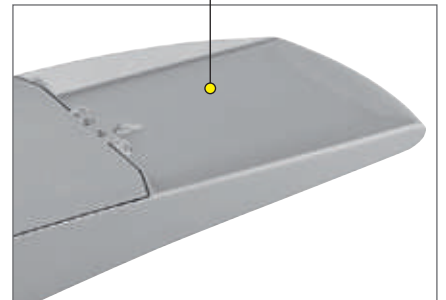
Galvanised steel prop keeping the cover wide open to facilitate maintenance operations

IP 66 electronic compartment

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

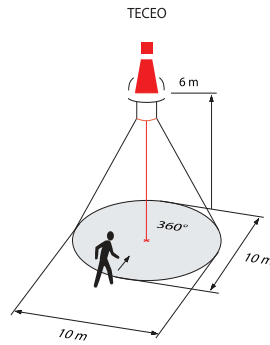
Surge protection up to 10kV

ThermiX®: large surface area for best possible heat extraction





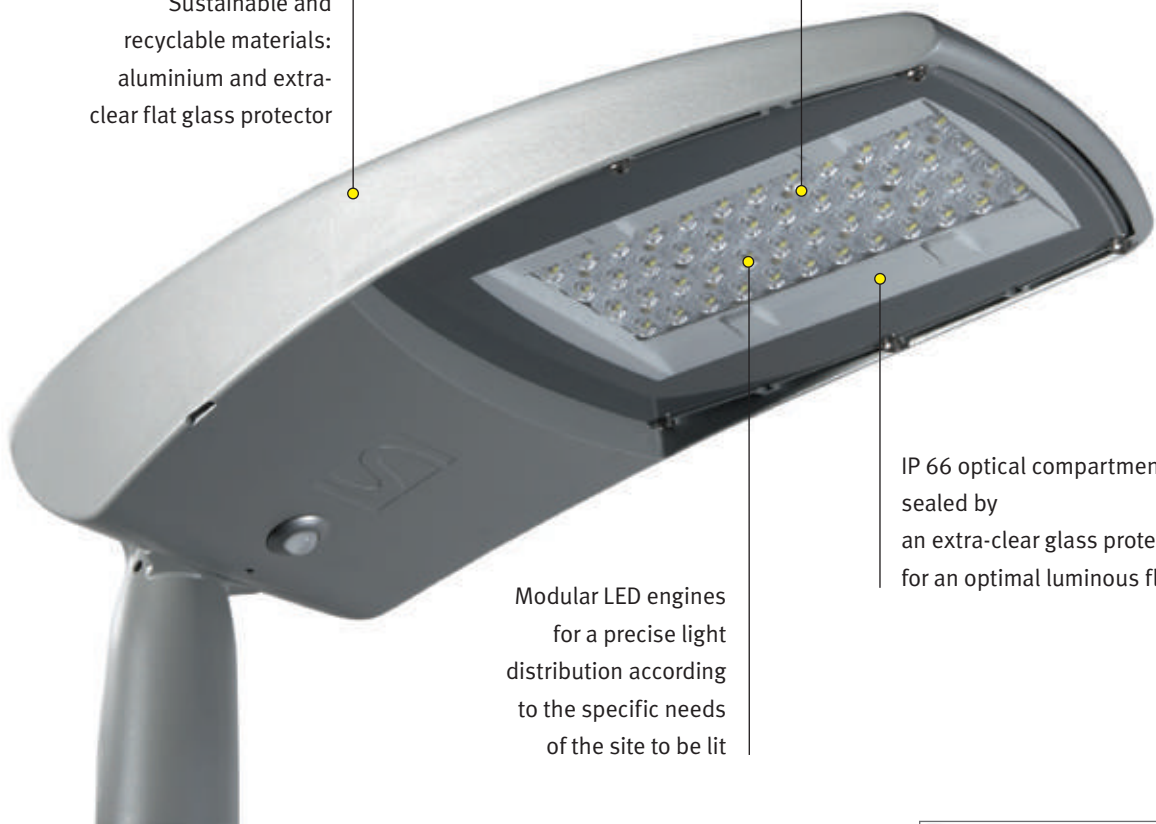
Motion sensor unit (option)



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



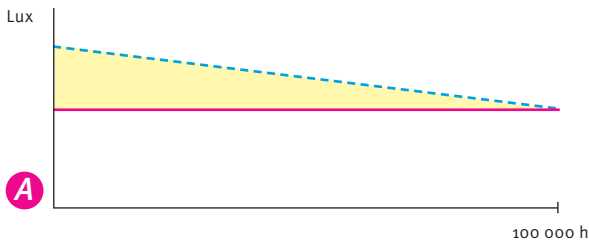
- Optic LensoFlex®2 "Large area" 5121

MAINTAINING THE LUMINOUS FLUX OVER TIME

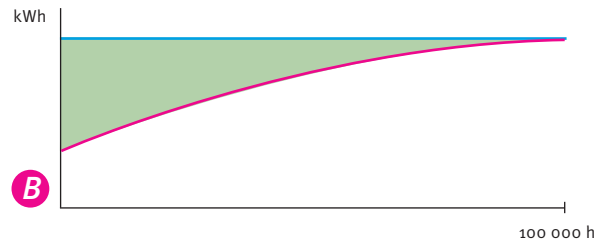
With a conventional solution, the depreciation of the luminous flux over time leads to excess lighting - and thus too much energy consumption - when the luminaires are installed so that the efficiency declines slowly to reach the minimum required level at the end of the installation's service life (graph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



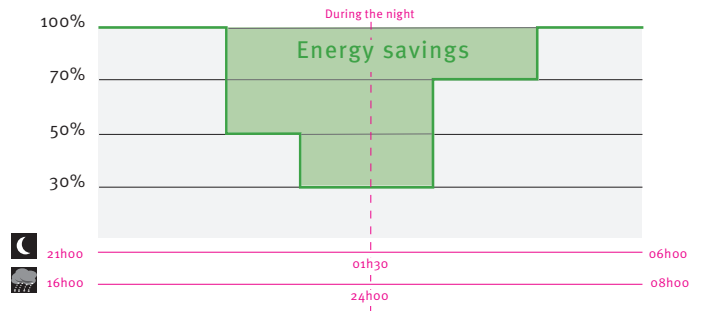
— Standard LED lighting level
 — Lighting level required = LED lighting level solution with CLO
 Excess lighting



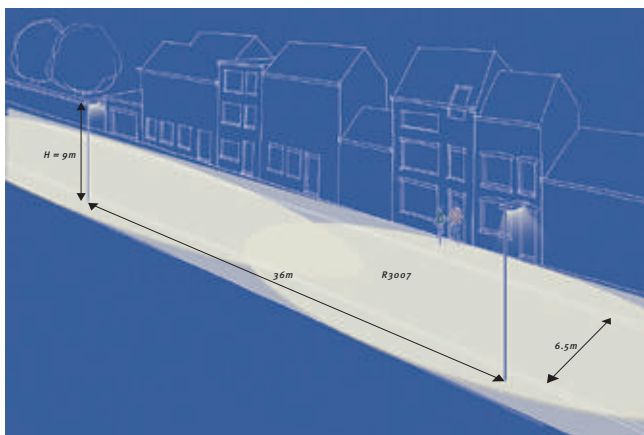
— Standard lighting consumption
 — LED lighting consumption with CLO
 Energy savings

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

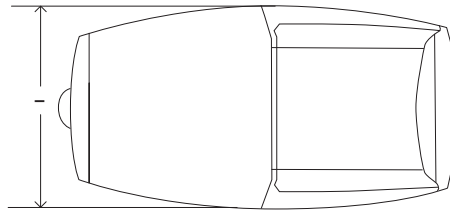
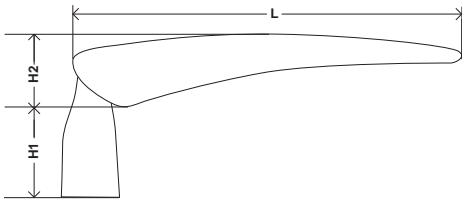


Teceo 1
 LensoFlex®2 48 LEDs @350mA
 4000K neutral white
 54W
 MF = 0.8
 M5 - classified roadway according to CIE 115
 $L_{ave} = 0.5cd/m^2$

By replacing the old luminaires equipped with 70W high-pressure sodium lamps the **power consumption has been reduced by 30%** to $0.23W/m^2$ while maintaining the $0.5cd/m^2$ required. $SLEEC-L = 0.46W / (m^2 \cdot cd/m^2)$ 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 7.9kg eq CO₂ according to the average European equivalent of $0.46kg \text{ eq CO}_2/kWh$.

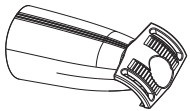
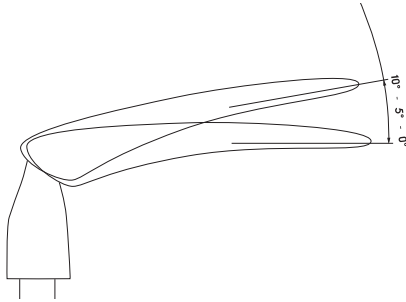
DIMENSIONS



	Teceo 1	Teceo 2
W	318mm	439mm
L	607mm	788mm
H1	141mm	138mm
H2	113mm	119mm

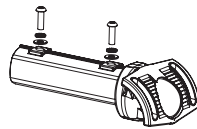
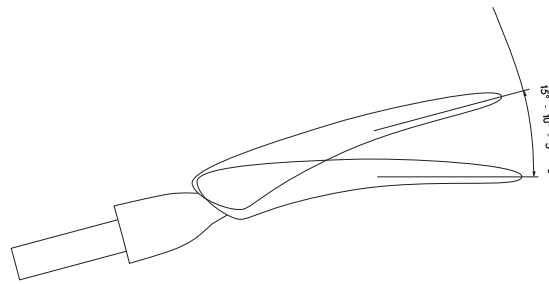
MOUNTING

POST-TOP POSITION

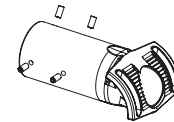


- Universal slip-over mounting onto a 42-60 or 76mm diameter spigot
Suitable for ITO poles and brackets

SIDE-ENTRY POSITION



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

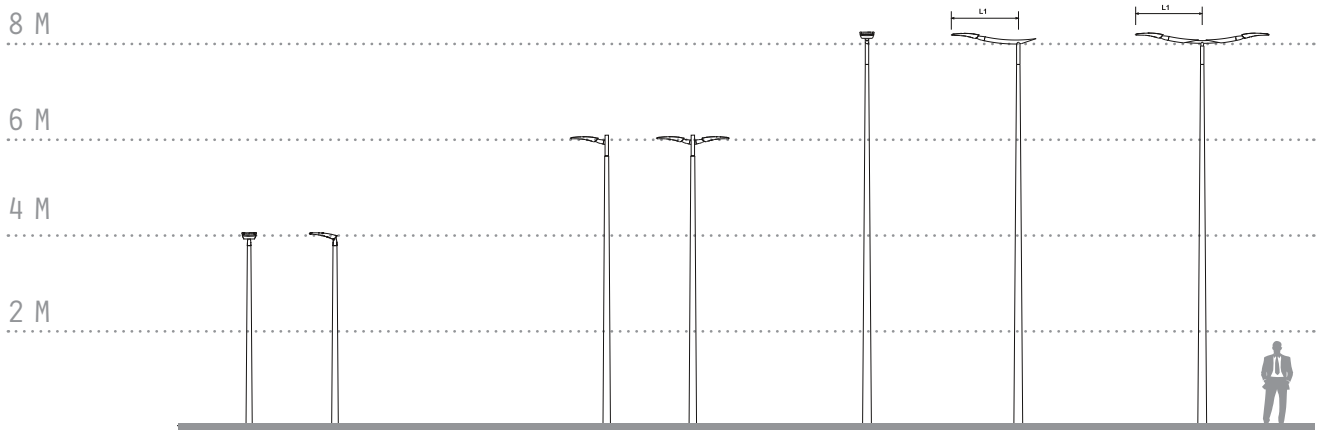


- Designed for Thylia poles

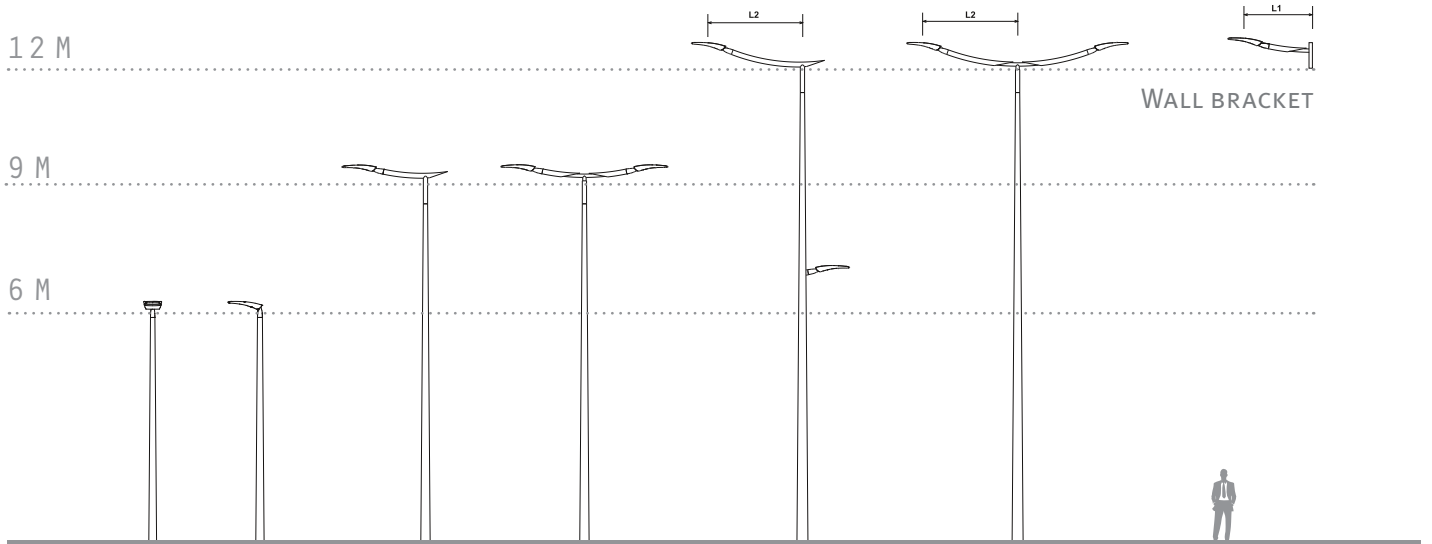


ITO POLES AND BRACKETS

ITO SMALL MODEL

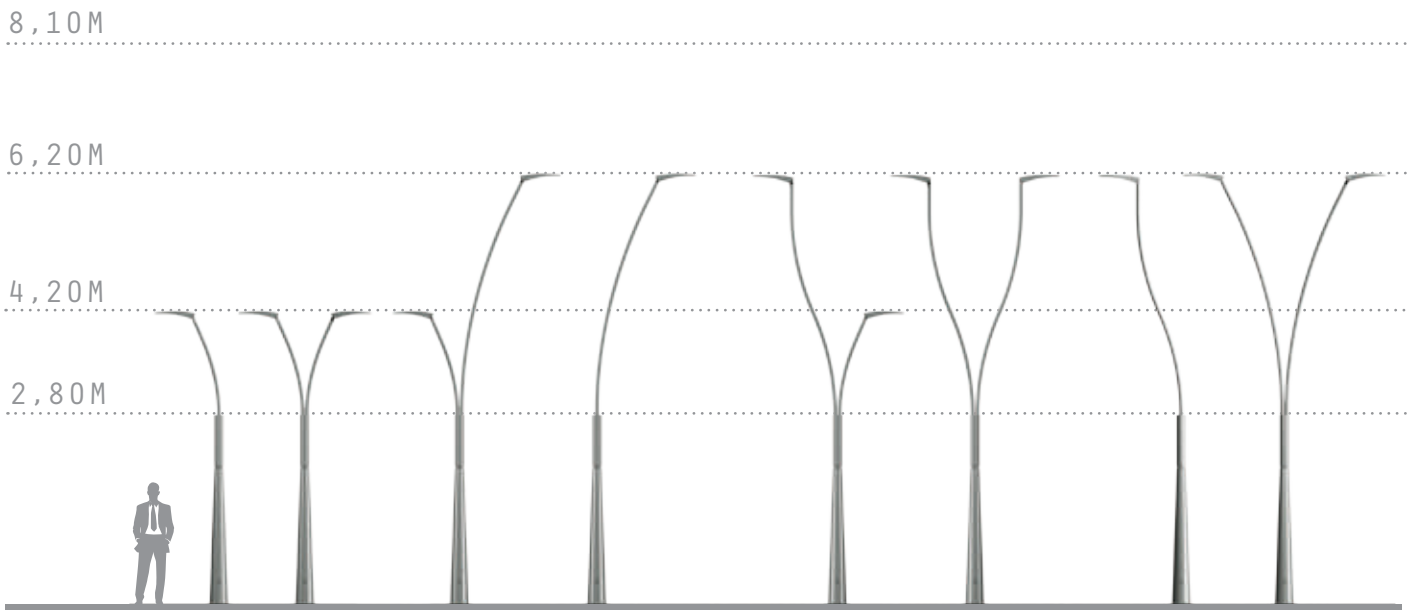


ITO LARGE MODEL

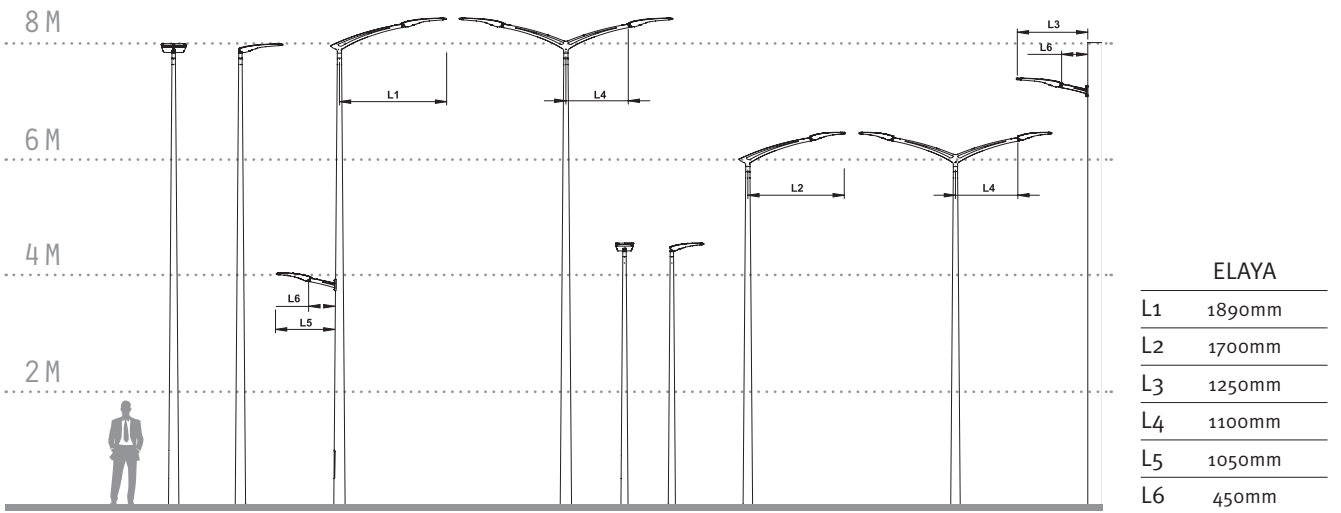


ITO	
L1	1200mm
L2	1680mm

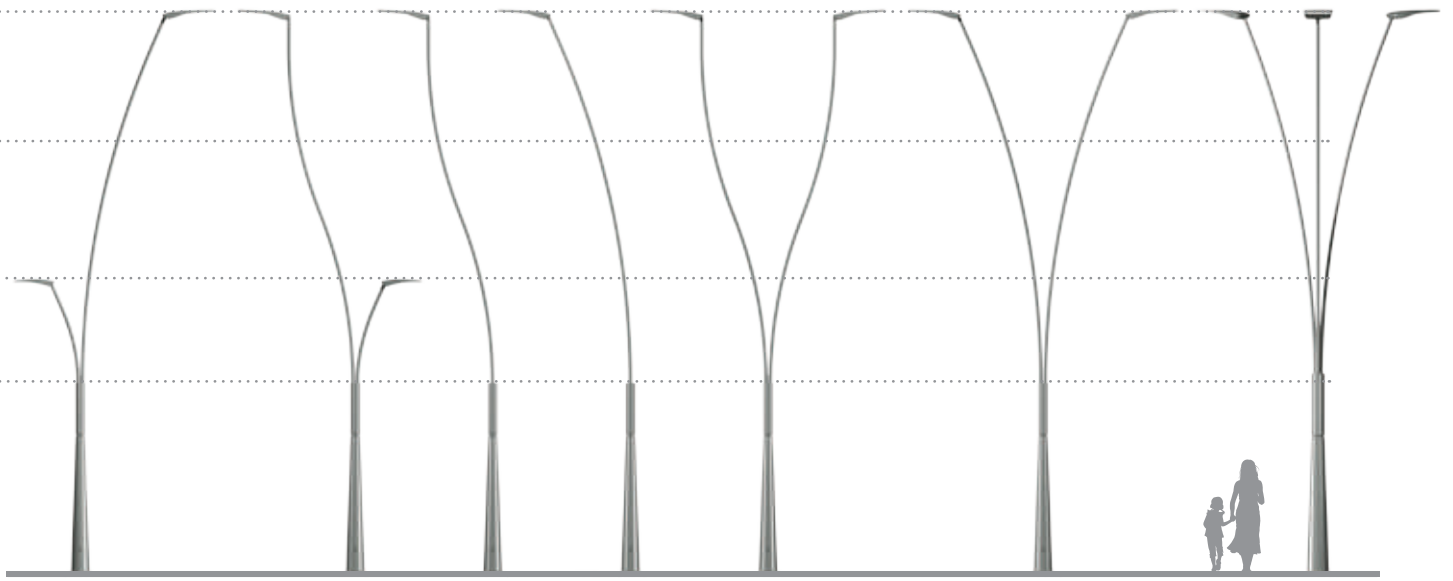
THYLIA POLES AND BRACKETS



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	6	●	●	●	
		Neutral White (4000K)	●	●	●	
		CCT LED	Warm White (3000K)	○	○	○
		Cool White (6200K)	○	○	○	
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		○	○	○	
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





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