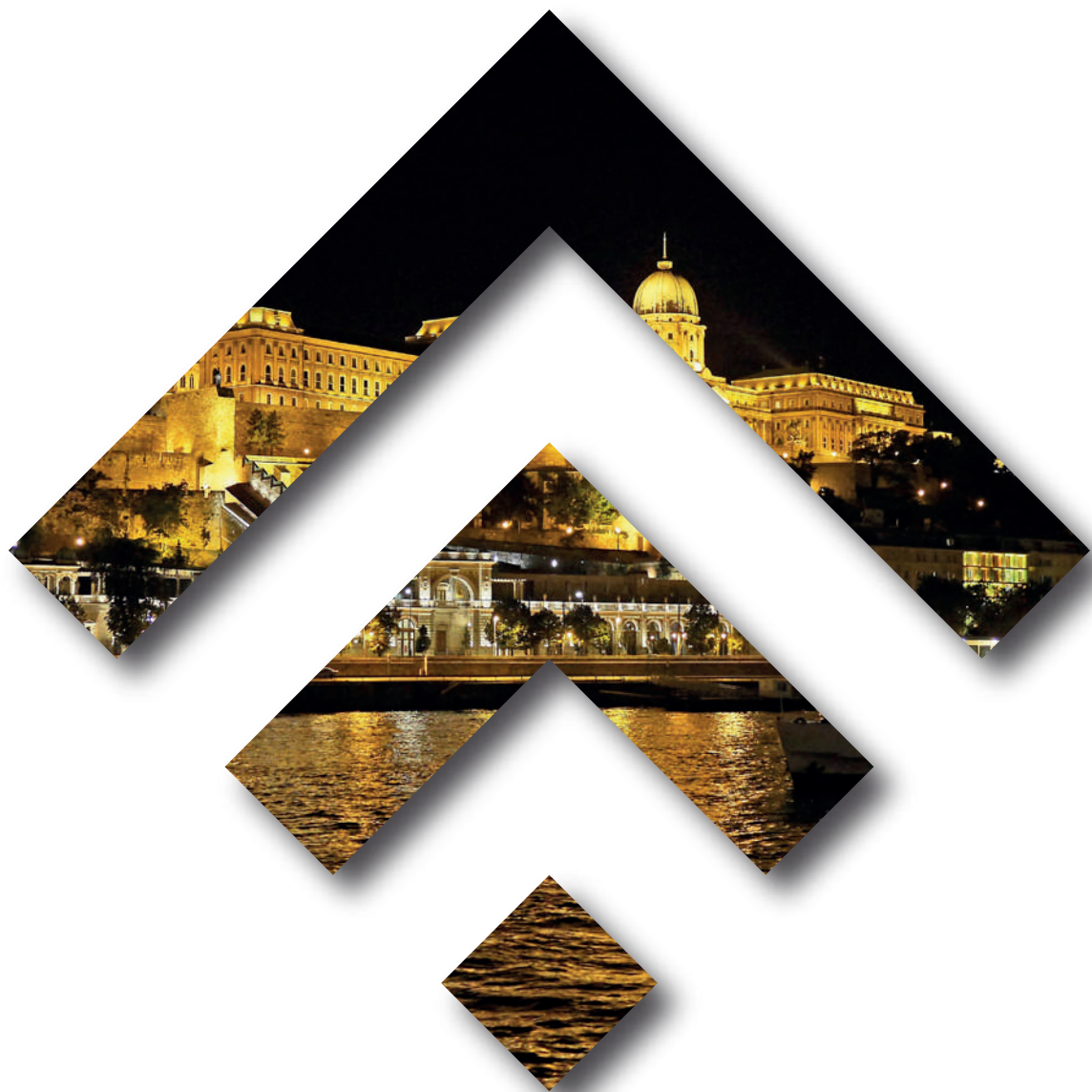


LUH



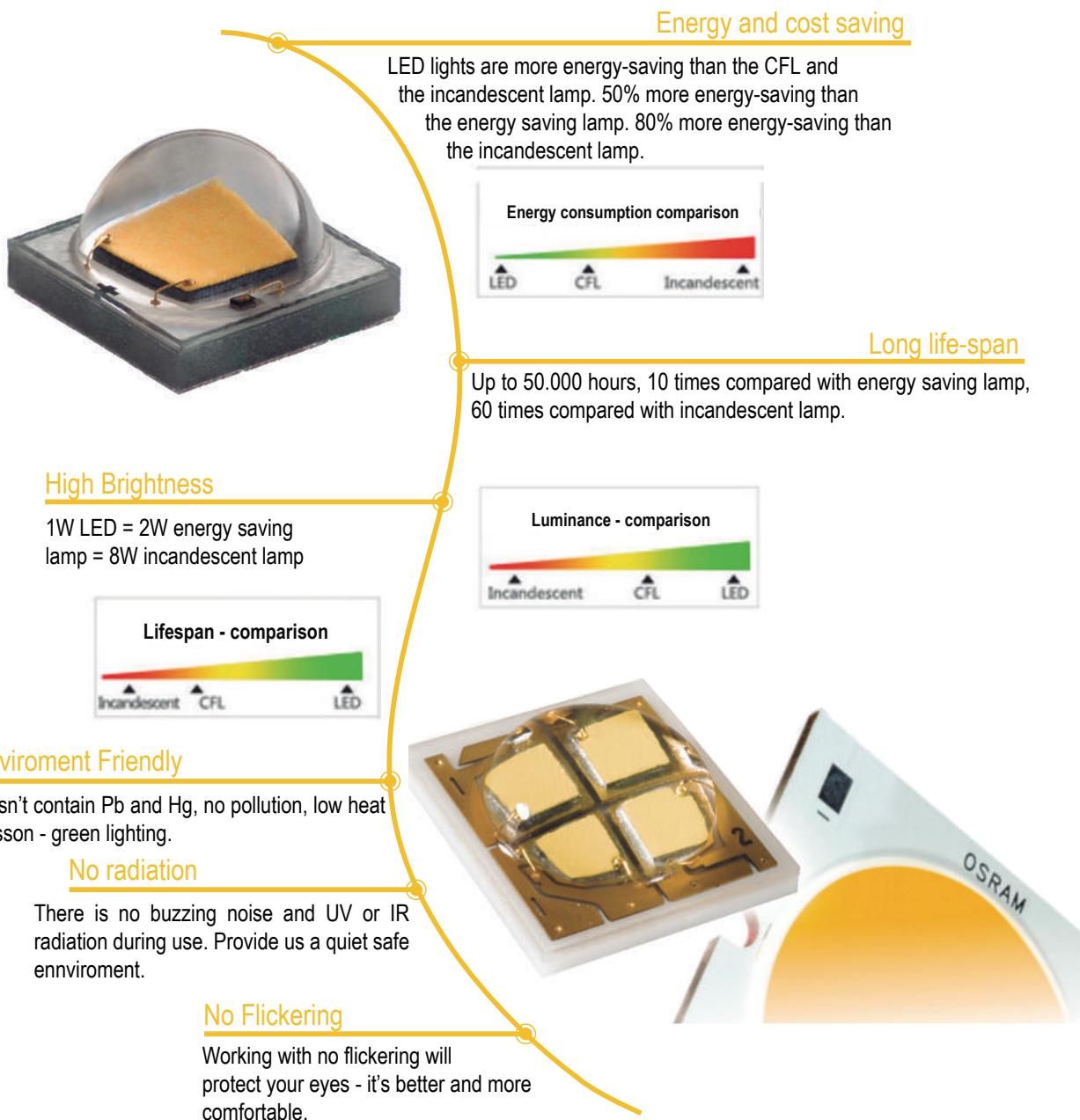
LUHART

public lighting | red | hybrid | solar

What's a LED?

A LED is a semiconductor diode [PN junction], which charged, emitted visible light and that is why it is called DEL or LED (Light Emitting Diode).

The light is not monochromatic [like a laser]. it consists of a relatively narrow spectral band and produced by the interaction of the electron. The trial of the light emission is made by applying an electrical source of energy called electroluminescence.



Today, governments are probably excited with the advance of technology and because they can get more output with less consumption, less pollution and less handling costs. LEDs are now highly desired in all applications taking into account the principle that they are the most environmentally friendly solution. This is the most important requirement in a world ever more dangerously polluted.

The Vision of SinalArte integrates the quality improvement of the products made available to the client. Following this idea, we have developed a solution of excellence. An integrated monitored system by remote control in order to improve either management and energy efficiency for the Exterior and/or Interior- the LuxArt Control.

The LuxArt Control reduces the luminance contamination. Due to the power reduction made at the lower activity periods of time, with the possibility to attach presence detectors to the luminaries.

While this value added product, we are highlighting the following:

Saving 60% on the energy costs for the Street Lighting, and up to 70% at buildings, using our LED lighting products: - Time profile's definition and measurement of the necessary power for each point, or for networking groups of luminaries depending on the rush hours, the empty hours and the busy periods;

- Saving energy controlling each lighting point accurately - reaching this savings turning off the lighting devices during the early morning hours and/or local luminosity adjustment.

Reduction in 70% of the incidental defaults on the power grid, total or partially;

- Real time detection of the incidental defaults on the power grid;

- Reducing the periods of problems resolution;

- Reduces the citizen's nuisance;

Reducing the maintenance costs in a rate of 80%:

- Avoiding the periodical management visits to the equipments using the remote control.

- More efficient reducing the emission of CO₂, when connected to the network;

- Increasing 30% the lamps lifespan, due to the power progressive control;

- Better environment performance improving the company's profile;

Design of the System

- Controller Panel, subtly attached to the luminaire;
- Management Software, to install at the client's equipment [PC, and other devices, portable or not]
- Communication Module [RF, GPRS, Bluetooth];



Representative smartframe of the LuxArt Control solution on a public lighting application

SinalArte offers two modules for the System:

LuxArt Control Standard | LuxArt Control Pro

SLCD-LD45W

+ info - consult technical sheet



LED DRIVER

DC/DC controller:

Constant current 350mA at 1050mA;

Short, sub and over voltage protection;

Options:

RF (Radio frequency)

BT (Bluetooth)

MP3 Player

FM Radio

Sensors of luminosity and presence;

Totally watertight;

Features: Telemetry

Warranty: 3 years.

SLCD-MODULE

+ info - consult technical sheet



AC/AC controller;

Short, sub and over voltage protection;

Options:

RF (Radio frequency)

BT (Bluetooth)

MP3 Player

FM Radio

Sensors of luminosity and presence;

Totally watertight;

Features:

Telemetry, DALI, Dimming PWM, Dimming 10~10V

Warranty: 3 years.

SLCD-AUDIO

+ info - consult technical sheet



Together with:

SLCD-LD45-ZLED family, SLCD-MODULE;

MP3 Player (SD-CARD, PEN USB);

FM RECEIVER

Warranty: 3 years.

SLCD-AUDIO-AMP

+ info - consultar ficha técnica



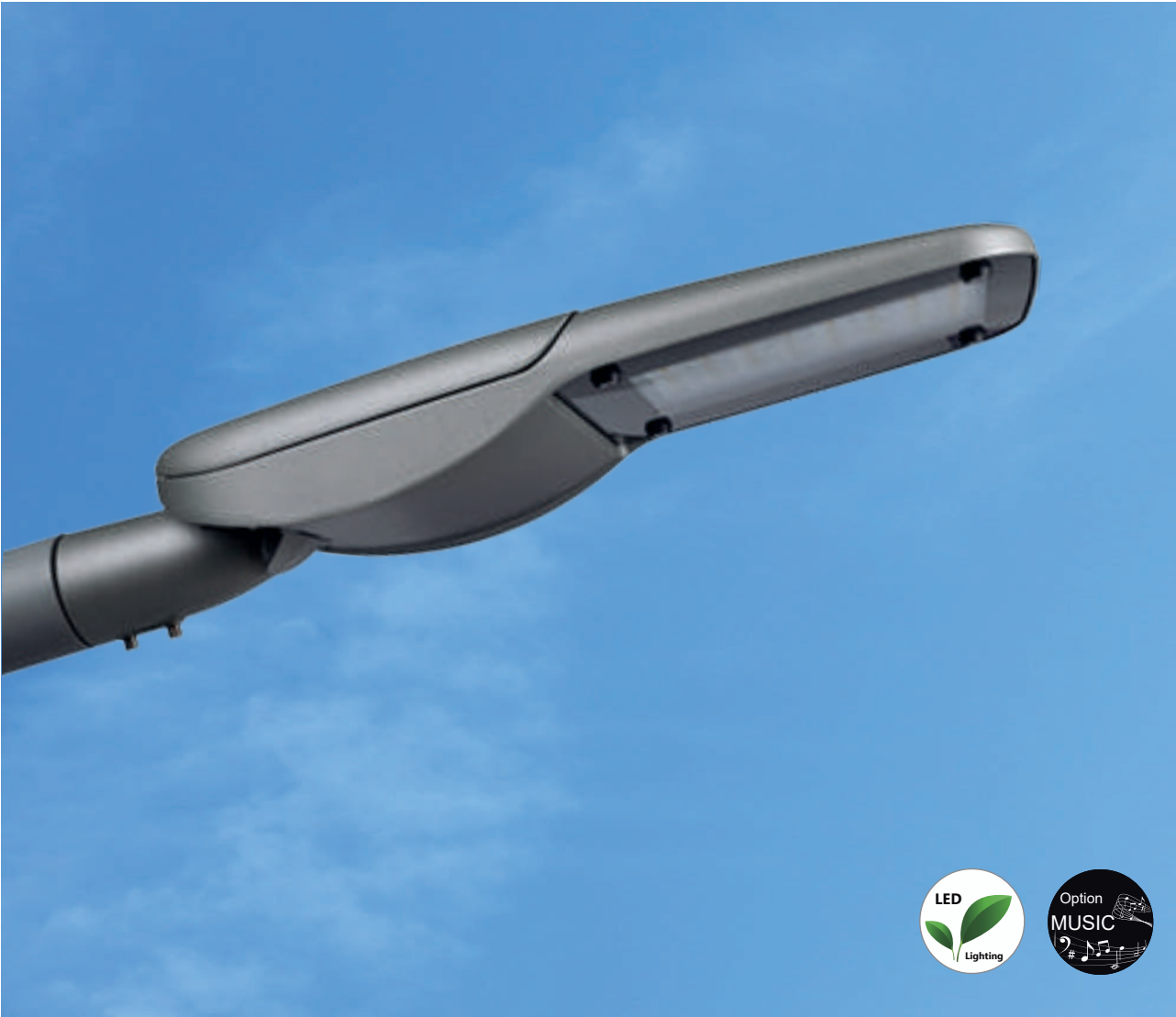
Use with SLCD-AUDIO;

Class AB Amplifier

40W + 40W on 8 Ohms columns with a THD = 10%;

Short circuit and overheat protection;

Warranty: 3 years.



(available from the following powers: 24W and 96W)

Note: The use of lenses together with the LEDs makes it possible to capture, expand and direct the light beam in order to use the full potential of the LEDs with extreme efficiency.

Some examples of possible powers:

Specifications	LX 24	LX 36	LX 48	LX 70	LX 96
Power	24W	36W	48W	70W	96W
Power Supply	100 - 240 VAC				
Frequency	50 - 60 Hz				
Initial LED flux	4170lm	8340lm	12510lm	16680lm	20850lm
LED (Osram) luminous efficiency	139lm/W				
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)				
Lifetime	More than 50.000 hours				



(available from the following powers: 24W and 100W)

Note: The use of lenses in combination with LEDs capture becomes possible expansion of the beam of light and directing the same to be used with extreme effectiveness, all potential os LEDs.

Some examples of possible power:

Specifications	SLL 24	SLL 36	SLL 48	SLL 70	SLL 96
Power	24W	36W	48W	70W	96W
Power Supply	100 - 240 VAC				
Frequency	50 - 60 Hz				
Initial LED flux	4170lm	8340lm	12510lm	16680lm	20850lm
LED (Osram) luminous efficiency	139lm/W				
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)				
Lifetime	More than 50.000 hours				



Fixed hot-dipped pole luminaire with high-quality anti-UV epoxy paint, which incorporates the high efficiency of the GLL model.

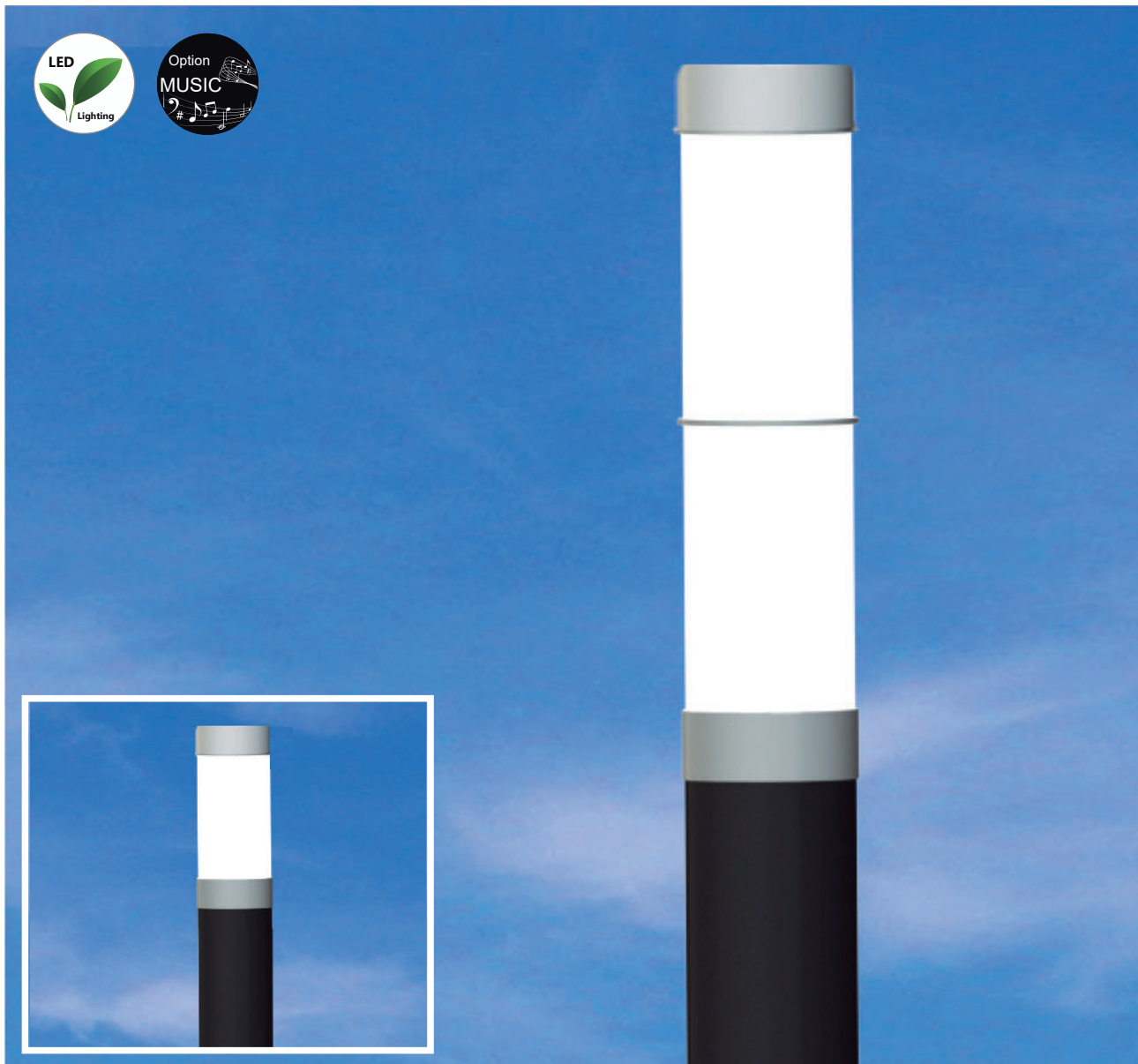
These elements can be supplied in various colors, upon request.

Specifications	GLL-C 30	GLL-C 60	GLL-C 90
Power	30W	60W	90W
Power Supply	85 - 264VAC		
Frequency	50-60Hz		
Initial LED	139lm/W		
LED (Osram) luminous efficiency	4170lm	8340lm	12510lm
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)		
Lifetime	More than 50.000 hours		
Recommended height	Until 6 m	8 - 10 m	10 - 12 m
Power system	Power Grid		



Specifications	Luminous Point A	Luminous Point B
Power	12 - 24W	48 - 144W
Power Supply	110/230V	
Frequency	50-60Hz	
Initial LED flux	139lm/W	
LED (Osram) luminous efficiency	1668lm - 3336lm	6672lm - 20016lm
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Power Grid	





Elegance, simplicity and luminous efficiency is the concept that marks this street lamp of the Sunrise Range. It uses high brightness LED lighting and can be supplied with 12 or 24W of power. Supported by a sturdy 152mm diameter hot dip galvanized pole with high quality anti-UV epoxy paint.

Note: Solar powered version is also available.

Specifications	TO 12	TO 24
Power	12W	24W
Power Supply	85 - 264VAC	
Frequency	50-60Hz	
Initial LED	1668lm	3336lm
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Power Grid	





Elegance, simplicity and luminous efficiency is the concept that marks this street lamp of the Sunrise Range. Uses high brightness LED illumination.

Supported by a set of three wooden poles (Ø255mm). It can also be supported by a robust pole (Ø152mm) metallized with high quality epoxy UV paint.

These luminaires adapt perfectly to pedestrian spaces or urban centers, allowing for ambient music or information about the surrounding space.

Note: Solar powered version is also available.

Specifications	TO 12 M	TO 24 M
Power	12W	24W
Power Supply	85 - 264VAC	
Frequency	50-60Hz	
Initial LED	1668lm	3336lm
LED (Osram)	139lm/W	
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Power Grid	





Street lamp with the harmonious blend of the rustic style and LED technology and economic efficiency. Incorporates two lighting points in a robust pole with 152mm diameter, hot galvanized with epoxy paint of high quality anti-UV.

Note: Also available with solar power.

Specifications	TO-LA 64
Power	32W+32W
Power Supply	85-264VAC
Frequency	50-60Hz
Initial LED	8896lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)
Lifetime	More than 50.000 hours
Power System	Power Grid





Street lamp with the harmonious blend of the rustic style and LED technology and economic efficiency. Incorporates two lighting points in robust poles, hot galvanized with epoxy paint of high quality anti-UV.

Note: Also available with solar power.

Specifications	TOR-L LR
Potwer	36W+12W
Power Supply	85-264VAC
Frequency	50-60Hz
Initial LED	6672lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)
Lifetime	More than 50.000 hours
Power System	Power Grid





Lean and elegant street lamp, available in two models, differentiated by the height of the luminaire, 500mm or 1000mm, respectively.

Specifications	TO18/LR-500	TO18/LR-1000
Power	18W	
Power Supply	85-264VAC	
Frequency	50-60Hz	
Initial LED	2502lm	
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Power Grid	



All LED kits sold by Sinalarte have a photovoltaic panel with monocrystalline silicon cells of high efficiency.

It is recommended:

Replace the battery after 6 years;

* The latitude of the country in question, in relation to the equator, is crucial to the leaning of the solar panel.



KIT GLL 30

- Head lamp: LED 30W
- Photovoltaic panel: 120W
- Charge Controller
- Controller with LED Drivers (Post not included)

Autonomy: 1 day
(can be changed according to customer requirements)

Option:
Hybrid System [Solar+ PowerGrid]



KIT GLL 60

- Head lamp: 60W
- Photovoltaic panel: 225W
- Charge Controller
- Controller with LED Drivers (Post not included)

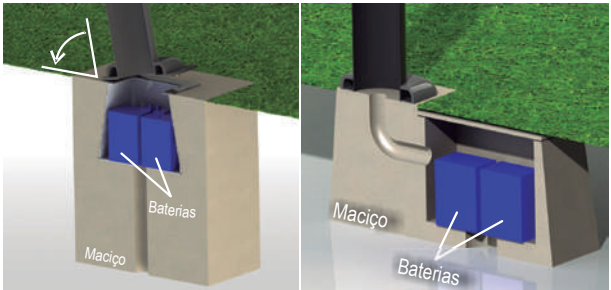
Autonomy: 1 day
(can be changed according to customer requirements)

Option:
Hybrid System [Solar+ PowerGrid]



Specifications	TO 12 PS	TO 24 PS
Power	12W	24W
Power Supply	24V DC	
Initial LED	1668lm	3336lm
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Solar Hybrid Power Grid	
Includes solar paneis and batteries		

Battery fixing and locating means



Option 1 - Battery case

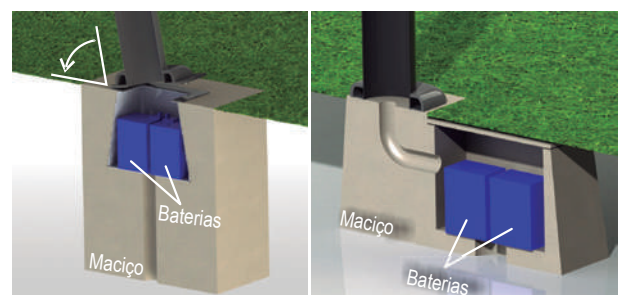
Option 2 - Massif made locally



It uses a solar power kit composed by a photovoltaic panel with high-efficiency monocrystalline cells, batteries, a controller and a charge controller.

Specifications	TO-C 12PS	TO-C 24PS
Power	12W	24W
Power Supply	24V DC	
Initial LED	1668lm	3336lm
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700 - 3500k (warm white)	
	3500 - 5000k (neutral white)	
	5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Solar Hybrid Power Grid	
Includes solar paneis and batteries		

Battery fixing and locating means



Option 1 - Battery case

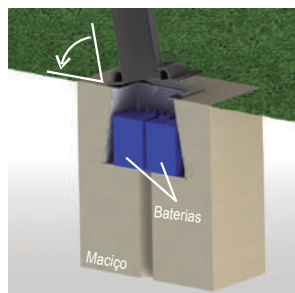
Option 2 - Massif made locally



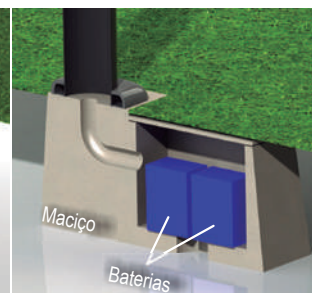
It uses a solar power kit composed by a photovoltaic panel with high-efficiency monocrystalline cells, batteries, a controller and a charge controller.

Specifications	TQ 12 PS	TQ 24 PS
Power	12W	24W
Power Supply	24V DC	
Initial LED	1668lm	3336lm
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700 - 3500k (warm white)	
	3500 - 5000k (neutral white)	
	5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Solar Hybrid Power Grid	
Includes solar panels and batteries		

Battery fixing and locating means



Option 1 - Battery case



Option 2 - Massif made locally



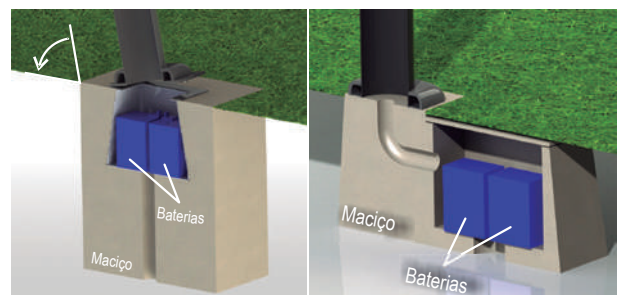
Solar lamp with modern design that incorporates two points of light of different intensities.

Model TOBL21: 7W+14W

Model TOBLL24: 8W+16W

Specifications	TOBL21 TOBLL24
Power	21W 24W
Power Supply	24V DC
Initial LED	2919lm 3336lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid Power Grid
Includes solar panels and batteries	

Battery fixing and locating means



Option 1 - Battery case

Option 2 - Massif made locally

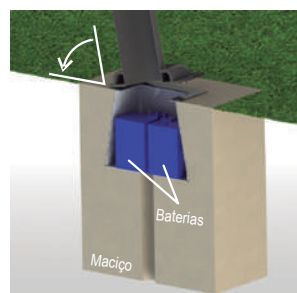


This street lamp is Este candeeiro de rua é a combinação harmoniosa entre o estilo rústico, tradicional e a tecnologia solar (limpa, renovável e economizadora). A alta eficiência do painel fotovoltaico e a elevada qualidade dos materiais utilizados na fabricação desta luminária, tornam-na a melhor escolha para a iluminação de espaços públicos, como passeios, jardins e parques lúdicos.

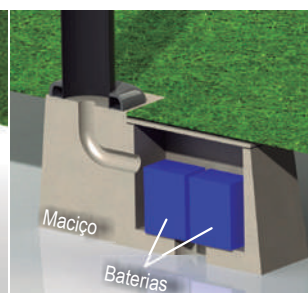
Specifications	TO-LA 24 PS
Power	24W
Power Supply	24V DC
Initial LED	3892lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2700 - 3500k (warm white) 3500 - 5000k (neutral white) 5000 - 6500k (cold white)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid

Includes solar panels and batteries

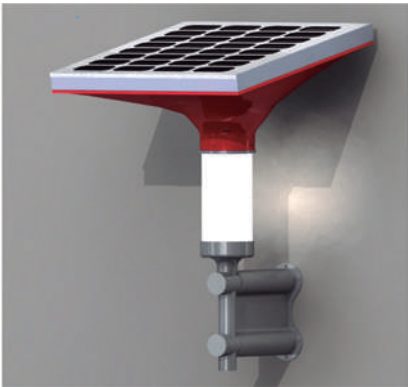
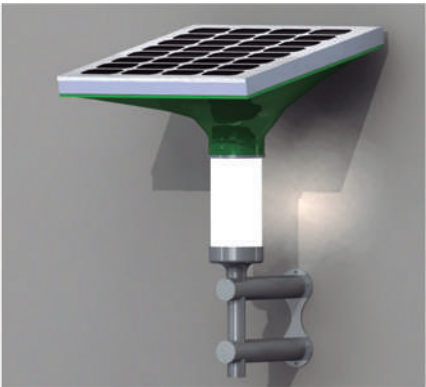
Battery fixing and locating means



Option 1 - Battery case



Option 2 - Massif made locally



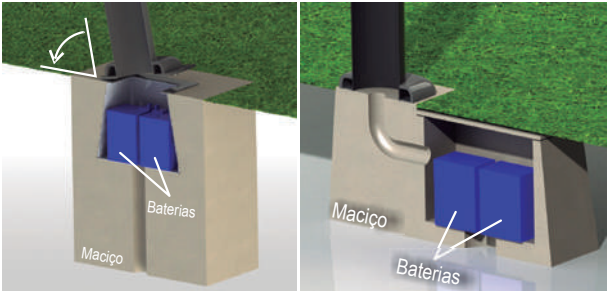
Specifications	TOR-P 12/25PS TOR-P 12/25 300	
Power	9W	
Power Supply	12V DC	230V AC
Initial LED	1668lm	
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700 - 3500k (warm white)	
	3500 - 5000k (neutral white)	
	5000 - 6500k (cold white)	
Lifetime	More than 50.000 hours	
Power System	Solar Hybrid	Power Grid
Includes solar paneis and batteries		

Wall lamp, resistant and elegant. Available in multiple colors upon request.



Specifications	T024LPS
Power	24 W
Power Supply	12V DC
Initial LED	3336lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2500-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (cold white)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid
Includes solar paneis and batteries	

Battery fixing and locating means



Option 1 - Battery case

Option 2 - Massif made locally



Specification	TO8LPS
Power	8 W
Power Supply	12V DC
Initial LED	1000lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2500-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (cold white)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid
Includes solar panels and batteries	



Specifications	TOR 24/12PS	TOR 36/12PS	TOR LR
Power	24W+12W	36W+12W	36W+12W
Power Supply	24/36V DC	24/36V DC	85-264V AC
Initial LED	5004lm	6672lm	6672lm
LED (Osram) luminous efficiency	139lm/W		
Color Temperature	2700-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (cold white)		
Lifetime	More than 50.000 hours		
Power System	Solar Hybrid		Power Grid
Includes solar paneis and batteries			

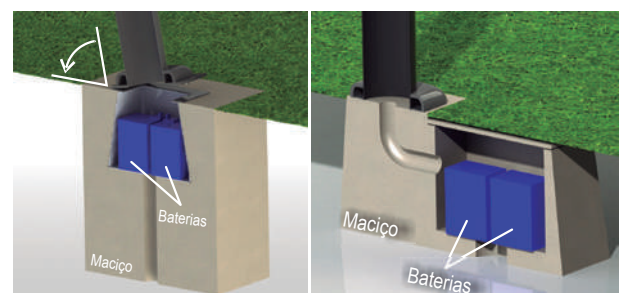


Street lamp with the harmonious blend of the rustic style and LED technology and economic efficiency. Incorporates two lighting points in robust poles, hot galvanized with epoxy paint of high quality anti-UV.

Note: Also available in power grid version.

Specifications	TOR-L24/12PS	TOR-L36/12PS
Power	24W+12W	36W+12W
Power Supply	24/36 DC	24/36 DC
Initial LED	5004lm	6672lm
LED (Osram) luminous efficiency	139lm/W	
Color Temperature	2700-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (cold white)	
Lifetime	More than 50.000 hours	
Power System	Solar Hybrid	
Includes solar paneis and batteries		

Battery fixing and locating means



Option 1 - Battery case

Option 2 - Massif made locally



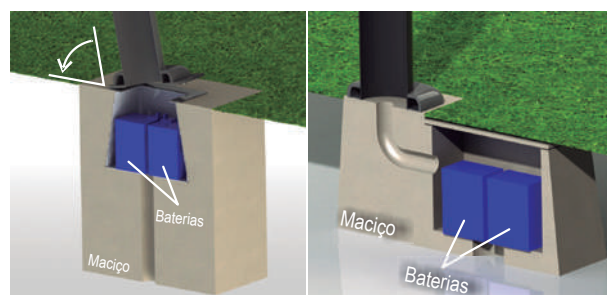
This lamp has a modern design, simple and fluid lines. It combines solar energy with high efficiency LED.

Option: This luminaire can have an innovative system that allows the reproduction of background music or any kind of sound (radio, warnings, general informations,...). Bringing life, harmony and safety to the local where they are installed.

The system is easily controlled by a authorized remate software (computer or Smartphone).

Specifications	PH16PS - A
Power	16W
Power Supply	24V DC
Initial LED	2224lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2700-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (cold white)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid Power Grid
Includes solar paneis and batteries	

Battery fixing and locating means



Option 1 - Battery case

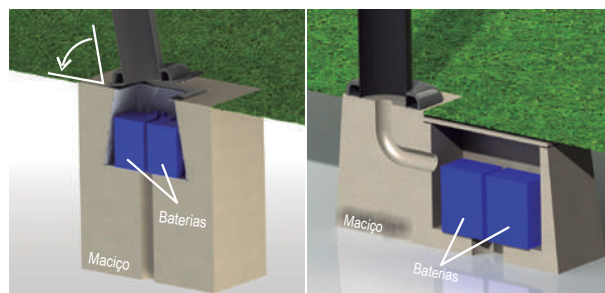
Option 2 - Massif made locally



Modern design with simple and elegant lines. Harmonious alliance between solar energy and high energy efficiency LED.
 Optional: This luminaire incorporates an innovative system that allows you to play ambient music or sounds of any kind (radio, warnings, information, ...). Bringing life, harmony and security to the place where they are installed.
 The entire system is easily controlled through an authorized remote software (computer or Smartphone).

Specifications	PH16PS - B
Power	16W
Power Supply	24V DC
Initial LED	2224lm
LED (Osram) luminous efficiency	139lm/W
Color Temperature	2700-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (cold white)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid Power Grid
Includes solar panels and batteries	

Battery fixing and locating means



Option 1 - Battery case

Option 2 - Massif made locally



Specifications	TO LR
Power	3W
Power Supply	24V DC 230V AC
Frequency	50-60Hz
Initial LED	12000mcd
Color Temperature	2700-3500K (warm white) 3500-5000K (neutral white) 5000-6500K (branco frio)
Lifetime	More than 50.000 hours
Power System	Solar Hybrid Power Grid

This terminal is composed by 12 high brightness LEDs and operates at 230VAC or with solar energy.

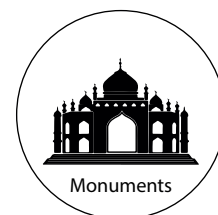
It has a controller that controls the brightness at night to reduce consumption.

Available in two sizes: 45cm and 60cm of height.

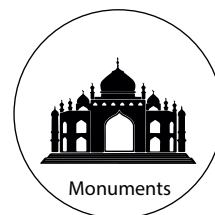
Optional: Solar power (including solar panels and batteries).



**New
Model**



Specifications		SFL-100	SFL-200	SFL-500	SFL-1000
Power		100W	200W	500W	1000W
Power Supply Voltage		100 – 305VAC			
Operating Frequency		50 – 60Hz			
Light Efficiency LED (138lm/W)		≥94%			
Lighting Efficiency		≥92%			
LED Consumption		100W	200W	500W	1000W
Total Consumption		97 – 100W	198 – 200W	498 – 500W	998 – 1000W
Initial FLOW LEDs		15000lm	30000lm	75000lm	150000lm
Color Temperature		3200 ~ 6500k			
Color Index (CRI)		>70			
Work Temperature		-30°C - 60°C			
Relative Humidity		10% ~ 90%			
Lifespan		>80.000 hours			
Controller (source)	Input Voltage	100 – 305VAC			
	Output Voltage	Máx. 214V			
	Input Current	0.435 A	0.870 A	2.72 A	4.54 A
	Output Current	700 mA	1050 mA	1050 mA	1050 mA
	Efficiency	94%			
Armor Composition		Cast Aluminum			
Protection Level		IP65/IP67			



Specifications		MFL-100	MFL-150	MFL-200
Power		100W	150W	200W
Power Supply Voltaje		100 – 305VAC		
Operating Frequency		50 – 60Hz		
Light Efficiency LED (138lm/W)		≥94%		
Lighting Efficiency		≥92%		
LED Consumption		100W	150W	200W
Total Consumption		97 – 100W	148 – 150W	198 – 200W
Initial Flow LEDs		12910lm	17307lm	23076lm
Color Temperature		3200 ~ 6500k		
Color Index (CRI)		>70		
Work Temperature		-30°C - 60°C		
Relative Humidity		10% ~ 90%		
Lifespan		>80.000 hours		
Controller (source)	Input Voltaje	100 – 305VAC		
	Output Voltaje	Máx. 214V		
	Input Current	0.435 A	0.652 A	0.870 A
	Output Current	700 mA	1050 mA	1050 mA
	Efficiency	94%		
Armor Composition		Cast Aluminum		
Protection Level		IP65/IP67		

Edition 2019



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Conceção, Desenvolvimento,
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e Sistemas de Iluminação com LED's