



PHOTOVOLTAIC SOLAR ENERGY STREETLIGHTS - SI-ESF-L-COMPACT-20W



Street lighting using solar streetlights has developed as one of the major applications of solar photovoltaics.

All our outdoor luminaires are based on high-performance LEDs, and incorporating our unique digital control system allowing the control of the functions of the luminaire (optical, temperature, etc.) and ensure their useful life, and an optical system modular developed to offer virtually exclusive photometric solutions for each client.

It is increasingly common to see on highways, streets and gardens lamps powered by solar energy. These devices, which allow to use solar energy to illuminate the streets, as part of our urban landscape. Our solar lamps are designed as a solution for outdoor lighting systems for public and private sector.

POLE AND BASE FLANGE



Has a tubular shape, is made of hot galvanized steel, according to UNE 37501-71, to avoid damage by weather, and calculated to withstand wind loads.

It supports the luminaire arm as well as the holding structure of the photovoltaic module.

BOX



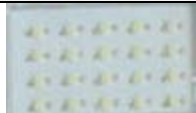
Galvanized steel box with plastic coating sprayed to contain the electronics and battery management.

PV PANEL



Are the elements responsible for capturing the sun's energy and transform it into electricity. Solar panels are quite similar to those used for other photovoltaic applications, only suitable in size.

LIGHTING



Elements that convert energy stored in the battery light. We employ efficient LED lights to maximize the captured energy, totally ruling out incandescent bulbs for being great wasteful of energy.

BATTERY



Component designed to store the energy collected by the panels during the day to use it at night in the lighting of the luminaires.

CONTROLLER



The lamp uses a system of regulation and control that is in a sealed box which guarantees its operation in damp and / or corrosive. This controller has been designed especially for the management of autonomous photovoltaic luminaires. Optimizes and streamlines the use of stored energy.

CHARACTERISTICS OF WORK

Loading time	Hours	6-8
On-time 100%	Hours	10-12
On-time 30%	Hours	>20
Autonomy without charge	Hours	12



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POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	4.5-5
Thickness	mm	3.25
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14
Distance between poles	m	10-15
SCREW		
Material	Type	Steel
Thread	mm	M16 x 4
BOX		
Material	Type	Extruded aluminum
Fixation	Type	Side to pole
Inclination angle	°	15
Size	mm	1100 x 330 x 160
Ingress Protection	IP	65
Index of protection	IK	08
PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	45
Tolerance	Wp	0 ~ + 1.35
Voltage at maximum power (Vmpp)	Volts	20
Current at maximum power (Impp)	Amps	2.51
Open circuit voltage (Voc)	Volts	22.10
Short circuit current (Isc)	Amps	2.78
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	1
Maximum series fuse	Amps	10
Efficiency (ηm)	%	12.58
Form Factor	%	≥ 73
LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	20
Voltage	Volts	12
Luminous flux	Lm/W	2000-2200
Color Temperature	k	3000/4000/5000/6000
Beam opening	°	65-148
Ambient temperature	°C	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000
BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	20
Voltage	Volts	12.8
Life span	Years	5
ELECTRONIC		
Switch	Type	On/Off
Infrared Sensor	PIR	30% / 100% of total flow
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
PRODUCT GUARANTEE		
2 years		