looking for the future

CATALOGUE
SOLAR PV
STREETLIGHTS

COMPANY

Solar Innova is a global company in the Renewable Energy sector, mainly in the Solar fiel, both Photovoltaic and Thermal Energy, enabling our customers to improve efficiency facilities and energy while reducing environmental impact.

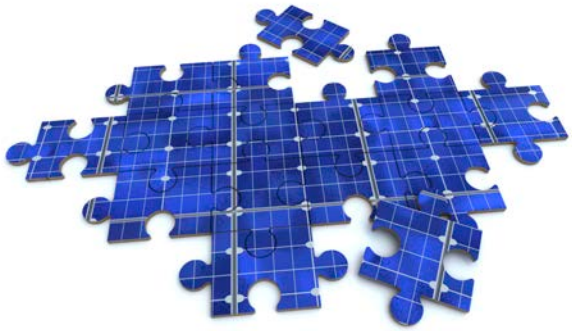
Technology plays a key role in **Solar Innova**.

We develop products with advanced technologies that allow us to be more competitive and to respect the environment. We are committed to providing our customers high quality services to meet your expectations and guarantee your complete satisfaction.

We have a distribution network in constant growth, to provide a service with maximum quality and speed.

We want to be present in all areas where is the development of alternative energy, offering added value to our products and services such as:

- √ Advice
- √ Competitiveness
- √ Sustainability
- √ Professionalism
- √ Service quality
- √ Certified by internationally recognized laboratories



DESCRIPTION

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

We have equipment specifically designed for this application, able to illuminate isolated parts of the grid with a very low maintenance costs.

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.

Our solar lamps are designed as a solution for outdoor lighting systems for public and private sector, there are a number of advantages over conventional lighting:

Economic

Installation significant cost and time savings. The conventional lighting has a number of costs such as civil works, manholes, pipes, copper cables, control panels, transformers, licenses, accountants, contracts with utilities, etc. With urban solar lamp, only you need to enable a concrete base as any conventional streetlight.

Maintenance

Maintenance costs for conventional luminaires represent a high percentage in terms of installation, as they have to withdraw lamps and ballasts with a very limited life. The incorporation of the latest LED technology allows a service life exceeding 11 years module, thus saving energy translated into quantitative terms is very high. The design and engineering of our lamp provides over 25 years life so obviously, the system will pay independently. In the environmental field we highlight the following:

- With the installation of our streetlights, we contribute to the use and operation of a source of clean, renewable energy and an important factor in how our environment, reduce CO2 emissions.

- We reduce light pollution, because not emit light in the sky.

Operation

During daylight hours the system captures and stores solar energy in the form of electricity. At dusk, the system automatically turns on the LED luminaire progressively, depending on the external light, using the energy stored in the batteries, providing the necessary light to illuminate space. At dawn, the LED module is automatically disabled starting a new cycle.

COMPONENTS

COMPONENT	DESCRIPTION
PV Modules	Are the elements responsible for capturing the sun's energy and transform it into electricity.
Lights	Elements that convert energy stored in the battery light.
Electronic	Optimize and rationalize the use of stored energy.
Batteries	Component designed to store the energy collected by the panels during the day to use it at night in the lighting of the lamps.
Pole	It is responsible for supporting other elements of the lamp.

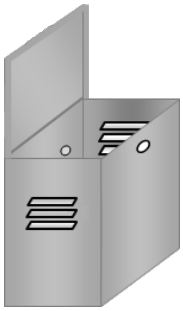
COMPONENTS

POLE

Has a tubular shape, is made of galvanized steel and powder coating, according to UNE 37501-71, to avoid damage by weather, and calculated to support other elements of the streetlight and wind loads.

Support the luminaire arm and the holding structure of the photovoltaic module.

BOX



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

PV MODULE

Are the elements responsible for capturing the sun's energy and transform it into electricity.

They tend to be clearly identifiable by their prominent position. Typically placed on top of the structure to achieve greater uptake of solar energy. The panels should always facing the Earth Ecuador and proper tilt function of latitude (to exist in this regard several criteria, one of them consisting of tilting the same number of degrees of latitude + 5).

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. In all these components efficient lamps are used to maximize the energy captured: fluorescent lamps, sodium lamps or LEDs, incandescent bulbs completely discarded 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 lamps.

Here the same principles as in the rest of the solar PV installations, requiring rechargeable batteries tolerate a great depth of discharge.

In the streetlights, the location of this component depends on the manufacturer. Some place it in a high area under the panel or under the luminaire. Thus the potential risks of tampering is reduced. This placement but also hinders change operations and maintenanc.

Other manufacturers choose instead to place it on the bottom where it is easier to manipulate for repairs or replacements, however is more exposed to undue people have access to it.

The choice of one type or another depends on the purpose and function of the area where they are to be placed. In any case to operate these components with low voltage of 12 volts, the risk of serious accidents is very small.

ELECTRONIC

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.

Optimize and rationalize the use of stored energy.

They are used to automate the switching on and off of the lights avoiding unnecessary waste of light besides getting the component life is lengthened.

This regulation is achieved in two ways:

- Through programmable devices on and off the lights based on the information entered on the times of sunrise and sunset every day of the year where you will be placing.
- By a small photodetector that detects the level of ambient natural light. When the cell detects low light intensity outside (night), turn on the lights when the light intensity is high (day), off.

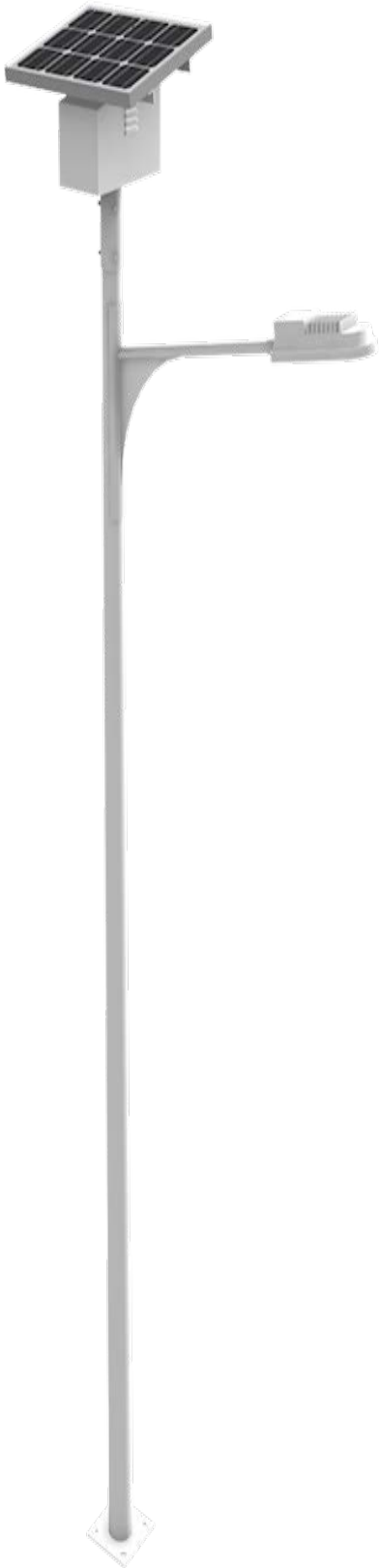
When after several cloudy days has not been able to recharge the battery properly and this is at a load level too low there is a system that prevents the lights come on to prevent battery discharge continue. Excessive discharge the battery may cause the blade is unable to recharge and thus unusable. This system also ensures that the time be enough sun again for recharging cycle is normally restored.

- The charge cycle has four stages: deep charge, EQ, absorption and flotation; thus the longer life of the batteries is guaranteed.

- Twilight switch that is used to delay turning on and off of the lamp at dusk and before dawn.

- Test has functions that facilitate maintenance operations.

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-MODERN-16W



POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	5
Thickness	mm	3.25
Diameter	mm	63-140
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	10

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	350 x 166 x 174

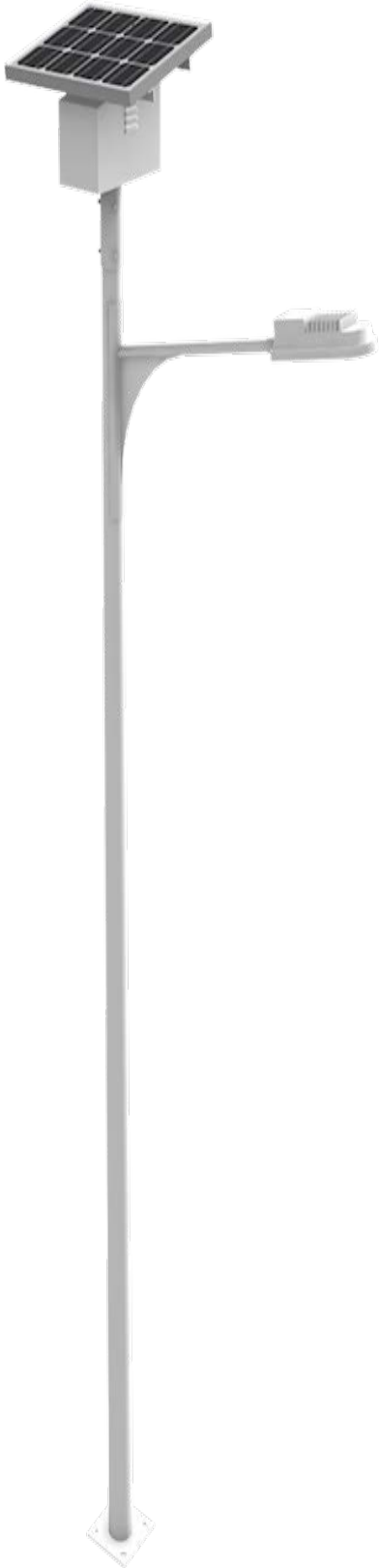
PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	70
Tolerance	Wp	0 ~ + 2.1
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	4
Open circuit voltage (Voc)	Volts	22.50
Short circuit current (Isc)	Amps	4.28
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.43
Form Factor	%	≥ 73
Size	mm	771 x 676 x 35
Weight	kg	6.5
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	16
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	350 x 166 x 174
Current	Amps	70
Voltage	Volts	12
Weight	kg	20.7
Life span	Years	8-10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-MODERN-36W



POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6.2
Thickness	mm	3
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M18 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	15

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	406 x 174 x 232

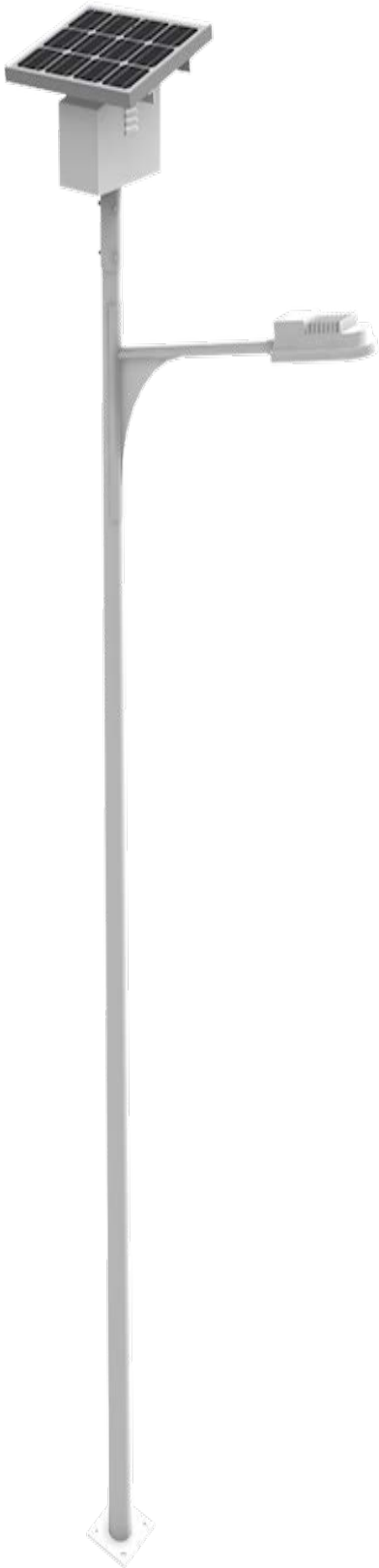
PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	120
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	17.90
Current at maximum power (Impp)	Amps	6.70
Open circuit voltage (Voc)	Volts	22.60
Short circuit current (Isc)	Amps	7.20
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.61
Form Factor	%	≥ 73
Size	mm	1,240 x 676 x 35
Weight	kg	10.4
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	36
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	67
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	406 x 174 x 232
Current	Amps	120
Voltage	Volts	12
Weight	kg	34.1
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-MODERN-54W



POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6
Thickness	mm	3
Diameter	mm	70 ~ 150
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M18 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	15

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	406 x 174 x 232

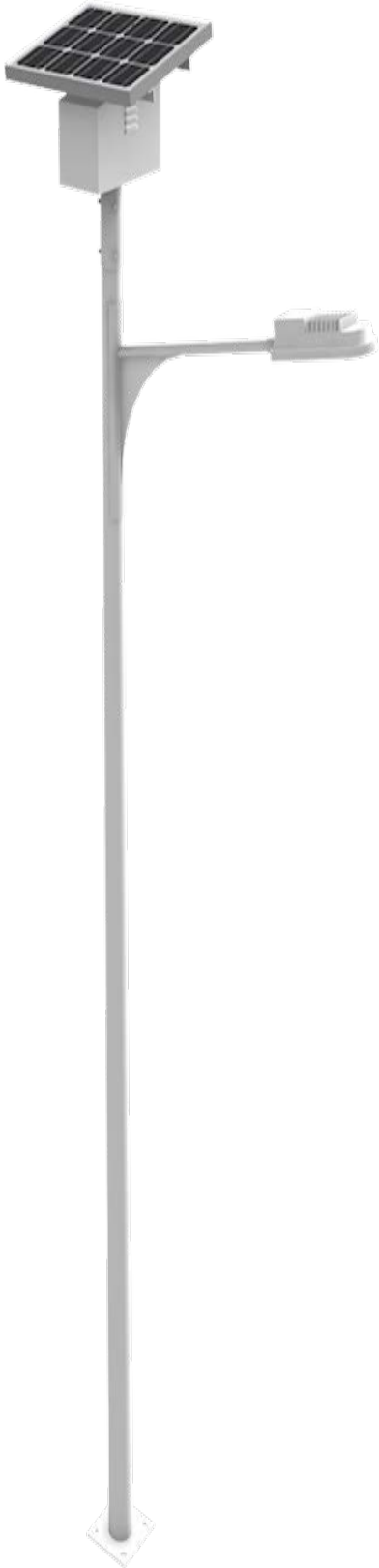
PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	145
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	18.25
Current at maximum power (Impp)	Amps	7.94
Open circuit voltage (Voc)	Volts	22.54
Short circuit current (Isc)	Amps	8.62
Maximum system voltage (Vsyst)	Volts	1,000 (IEC)
Diodes (By-pass)	Quantity	4
Maximum series fuse	Amps	15
Efficiency (ηm)	%	14.47
Form Factor	%	≥ 73
Size	mm	1,199 x 808 x 35
Weight	kg	12.5
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	610 x 260 x 62
Light source	Type	High Brightness LED diode
Power	W	54
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	406 x 174 x 232
Current	Amps	120
Voltage	Volts	12
Weight	kg	34.1
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-MODERN-60W



POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	8
Thickness	mm	3.25
Diameter	mm	70 ~ 160
Base flange	mm	300 x 300 x 14

SCREW		
Material	Type	Steel
Thread	mm	M18 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	6

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	329 x 172 x 221

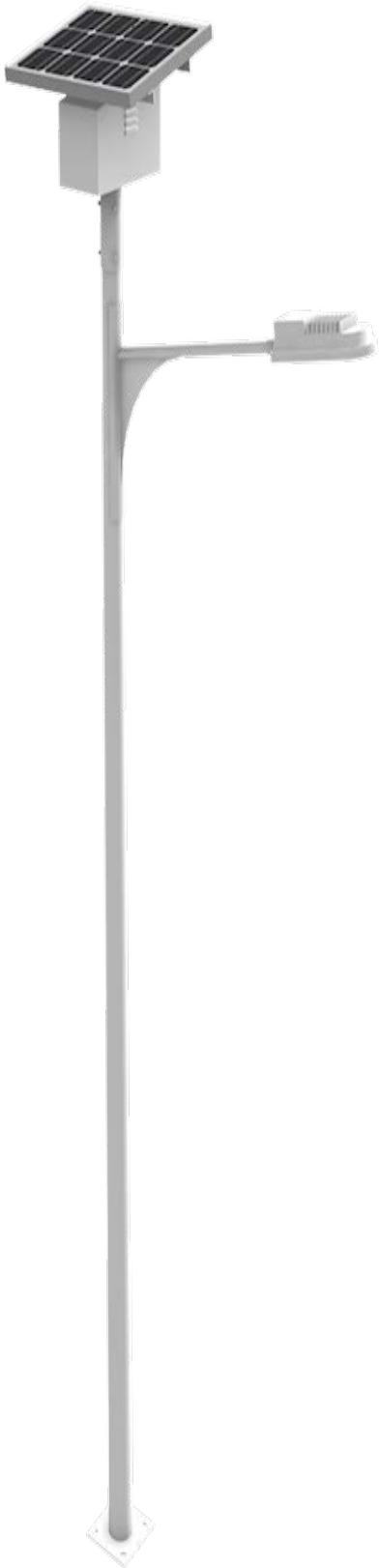
PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	90
Tolerance	Wp	0 ~ + 2.7
Voltage at maximum power (Vmpp)	Volts	17.90
Current at maximum power (Impp)	Amps	5,03
Open circuit voltage (Voc)	Volts	22.10
Short circuit current (Isc)	Amps	5.53
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73
Size	mm	1,005 x 676 x 35
Weight	kg	8.1
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	60
Voltage	Volts	24
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	54
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	329 x 172 x 221
Current	Amps	80
Voltage	Volts	12
Weight	kg	20.7
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-MODERN-70W



POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6.16
Thickness	mm	3
Diameter	mm	140
Base flange	mm	350 x 350 x 14

SCREW		
Material	Type	Steel
Thread	mm	M18 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	5

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	406 x 174 x 232

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	120
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	6.86
Open circuit voltage (Voc)	Volts	21.90
Short circuit current (Isc)	Amps	7.56
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.61
Form Factor	%	≥ 73
Size	mm	1,240 x 676 x 35
Weight	kg	10.4
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	70
Voltage	Volts	24
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	406 x 174 x 232
Current	Amps	120
Voltage	Volts	12
Weight	kg	34.1
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-ROUND-16W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	4.3
Thickness	mm	3
Diameter	mm	89
Base flange	mm	260 x 260 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	2

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	350 x 166 x 174

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	60
Tolerance	Wp	0 ~ + 1.8
Voltage at maximum power (Vmpp)	Volts	18.30
Current at maximum power (Impp)	Amps	3.28
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	3.57
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73
Size	mm	670 x 676 x 35
Weight	kg	5.7
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	16
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	350 x 166 x 174
Current	Amps	65
Voltage	Volts	12
Weight	kg	18.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-ROUND-36W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6.2
Thickness	mm	3.25
Diameter	mm	114
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	4

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	483 x 170 x 240

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	120
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	6.85
Open circuit voltage (Voc)	Volts	21.90
Short circuit current (Isc)	Amps	7.56
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.61
Form Factor	%	≥ 73
Size	mm	1,240 x 676 x 35
Weight	kg	10.4
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	36
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	483 x 170 x 240
Current	Amps	150
Voltage	Volts	12
Weight	kg	39.5
Life span	Years	8-10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-CLASSIC-16W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	4.3
Thickness	mm	3
Diameter	mm	89
Base flange	mm	260 x 260 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	2

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	350 x 166 x 174

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	60
Tolerance	Wp	0 ~ + 1.8
Voltage at maximum power (Vmpp)	Volts	18.30
Current at maximum power (Impp)	Amps	3.28
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	3.57
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73
Size	mm	670 x 676 x 35
Weight	kg	5,7
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	16
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	350 x 166 x 174
Current	Amps	65
Voltage	Volts	12
Weight	kg	18.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-CLASSIC-36W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6.25
Thickness	mm	3.25
Diameter	mm	114
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	4

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	483 x 170 x 240

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	120
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	6.85
Open circuit voltage (Voc)	Volts	21.90
Short circuit current (Isc)	Amps	7.56
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.61
Form Factor	%	≥ 73
Size	mm	1,240 x 676 x 35
Weight	kg	5.7
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	36
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	483 x 170 x 240
Current	Amps	150
Voltage	Volts	12
Weight	kg	39.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-DECOR1-16W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	4.3
Thickness	mm	3
Diameter	mm	89
Base flange	mm	260 x 260 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	2

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	350 x 166 x 174

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	60
Tolerance	Wp	0 ~ + 1.8
Voltage at maximum power (Vmpp)	Volts	18.30
Current at maximum power (Impp)	Amps	3.28
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	3.57
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73
Size	mm	670 x 676 x 35
Weight	kg	5.7
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	16
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	350 x 166 x 174
Current	Amps	65
Voltage	Volts	12
Weight	kg	18.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-DECOR1-36W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6.2
Thickness	mm	3.25
Diameter	mm	114
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	4

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	483 x 170 x 240

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	120
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	6.85
Open circuit voltage (Voc)	Volts	21.90
Short circuit current (Isc)	Amps	7.56
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.61
Form Factor	%	≥ 73
Size	mm	1,240 x 676 x 35
Weight	kg	10.4
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	36
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	483 x 170 x 240
Current	Amps	150
Voltage	Volts	12
Weight	kg	39.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-DECOR2-16W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	4.3
Thickness	mm	3
Diameter	mm	89
Base flange	mm	260 x 260 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	2

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	350 x 166 x 174

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	60
Tolerance	Wp	0 ~ + 1.8
Voltage at maximum power (Vmpp)	Volts	18.30
Current at maximum power (Impp)	Amps	3.28
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	3.57
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73
Size	mm	670 x 676 x 35
Weight	kg	10.4
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	16
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	350 x 166 x 174
Current	Amps	65
Voltage	Volts	12
Weight	kg	18.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Ingress Protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-DECOR2-36W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Zinc hot dip galvanized and powder-coated
Material	Type	Steel grade Q235
Height	m	6.2
Thickness	mm	3.25
Diameter	mm	114
Base flange	mm	280 x 280 x 14

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

WIRING		
Material	Type	Copper
Section	mm	2 x 2.5
Length	m	4

BOX		
Material	Type	Galvanized steel with plastic coated
Ingress Protection	IP	54
Size	mm	483 x 170 x 240

PV PANELS		
Cells	Type	Monocrystalline/Polycrystalline
Maximum power (Pmpp)	Wp	120
Tolerance	Wp	0 ~ + 3.6
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	6.85
Open circuit voltage (Voc)	Volts	21.90
Short circuit current (Isc)	Amps	7.56
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	15
Efficiency (ηm)	%	13.61
Form Factor	%	≥ 73
Size	mm	1,240 x 676x 35
Weight	kg	10.4
Guarantee	Years	12

LIGHTING		
Surround	Material	Aluminum/Stainless Steel
Size	mm	350 x 166 x 174
Light source	Type	High Brightness LED diode
Power	W	36
Voltage	Volts	12
Luminous flux	Lm/W	90 ~ 110
Ambient temperature	ºC	- 25 ~ + 75
Life span	Hours	75,000
Ingress Protection	IP	65
Guarantee	Years	2

BATTERY		
Technology	Type	Gel (free maintenance)
Size	mm	483 x 170 x 240
Current	Amps	150
Voltage	Volts	12
Weight	kg	39.5
Life span	Years	8 ~ 10
Guarantee	Years	2

ELECTRONIC		
Power control	Type	Optical and timer
Current	Amps	10
Voltage	Volts	12
Degree of protection	IP	67
Guarantee	Years	2

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-COMPACT-5W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	2.5-3
Thickness	mm	3.25
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14
Distance between poles	m	8-10

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

BOX		
Material	Type	Extruded aluminum
Fixation	Type	Side to pole
Inclination angle	º	15
Size	mm	540 x 230 x 80
Ingress Protection	IP	65
Index of protection	IK	08

PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	10
Tolerance	Wp	0 ~ + 0.30
Voltage at maximum power (Vmpp)	Volts	17.50
Current at maximum power (Impp)	Amps	0.57
Open circuit voltage (Voc)	Volts	22
Short circuit current (Isc)	Amps	0.62
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	1
Maximum series fuse	Amps	10
Efficiency (ηm)	%	9.85
Form Factor	%	≥ 73

LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	5
Voltage	Volts	12
Luminous flux	Lm/W	500-700
Color Temperature	k	3000/4000/5000/6000
Beam opening	º	65-148
Ambient temperature	ºC	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000

BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	5
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

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-COMPACT-10W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	3-3.5
Thickness	mm	3.25
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14
Distance between poles	m	8-10

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

BOX		
Material	Type	Extruded aluminum
Fixation	Type	Side to pole
Inclination angle	º	15
Size	mm	600 x 330 x 80
Ingress Protection	IP	65
Index of protection	IK	08

PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	25
Tolerance	Wp	0 ~ + 0.75
Voltage at maximum power (Vmpp)	Volts	20
Current at maximum power (Impp)	Amps	1.40
Open circuit voltage (Voc)	Volts	22.10
Short circuit current (Isc)	Amps	1.54
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	1
Maximum series fuse	Amps	10
Efficiency (ηm)	%	11.39
Form Factor	%	≥ 73

LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	10
Voltage	Volts	12
Luminous flux	Lm/W	1000-1200
Color Temperature	k	3000/4000/5000/6000
Beam opening	º	65-148
Ambient temperature	ºC	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000

BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	10
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

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-COMPACT-15W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	4-4.5
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	º	15
Size	mm	870 x 330 x 160
Ingress Protection	IP	65
Index of protection	IK	08

PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	35
Tolerance	Wp	0 ~ + 1.05
Voltage at maximum power (Vmpp)	Volts	20
Current at maximum power (Impp)	Amps	1.91
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	2.08
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	1
Maximum series fuse	Amps	10
Efficiency (ηm)	%	12.36
Form Factor	%	≥ 73

LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	15
Voltage	Volts	12
Luminous flux	Lm/W	1500-1700
Color Temperature	k	3000/4000/5000/6000
Beam opening	º	65-148
Ambient temperature	ºC	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000

BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	15
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

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

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	º	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	º	65-148
Ambient temperature	ºC	- 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

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-COMPACT-30W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	5-6
Thickness	mm	3.25
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14
Distance between poles	m	15-20

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

BOX		
Material	Type	Extruded aluminum
Fixation	Type	Side to pole
Inclination angle	º	15
Size	mm	1110 x 380 x 160
Ingress Protection	IP	65
Index of protection	IK	08

PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	60
Tolerance	Wp	0 ~ + 1.8
Voltage at maximum power (Vmpp)	Volts	20
Current at maximum power (Impp)	Amps	3.28
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	3.57
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73

LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	30
Voltage	Volts	12
Luminous flux	Lm/W	3000-3200
Color Temperature	k	3000/4000/5000/6000
Beam opening	º	65-148
Ambient temperature	ºC	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000

BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	30
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

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-COMPACT-40W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	7-8
Thickness	mm	3.25
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14
Distance between poles	m	20-30

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

BOX		
Material	Type	Extruded aluminum
Fixation	Type	Side to pole
Inclination angle	º	15
Size	mm	1285 x 380 x 160
Ingress Protection	IP	65
Index of protection	IK	08

PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	70
Tolerance	Wp	0 ~ + 2.1
Voltage at maximum power (Vmpp)	Volts	20
Current at maximum power (Impp)	Amps	3.83
Open circuit voltage (Voc)	Volts	22.30
Short circuit current (Isc)	Amps	4.17
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.43
Form Factor	%	≥ 73

LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	40
Voltage	Volts	12
Luminous flux	Lm/W	4000-4200
Color Temperature	k	3000/4000/5000/6000
Beam opening	º	65-148
Ambient temperature	ºC	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000

BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	40
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

PHOTOVOLTAIC SOLAR ENERGY
STREETLIGHTS - SI-ESF-L-COMPACT-60W

POLE, PANEL BRACKET, BASE FLANGE		
Support structure	Material	Galvanized steel with hot dip
Material	Type	Steel grade Q235
Height	m	8-10
Thickness	mm	3.25
Diameter	mm	63 ~ 140
Base flange	mm	280 x 280 x 14
Distance between poles	m	25-40

SCREW		
Material	Type	Steel
Thread	mm	M16 x 4

BOX		
Material	Type	Extruded aluminum
Fixation	Type	Side to pole
Inclination angle	º	15
Size	mm	1285 x 380 x 160
Ingress Protection	IP	65
Index of protection	IK	08

PV PANELS		
Cells	Type	Polycrystalline
Maximum power (Pmpp)	Wp	90
Tolerance	Wp	0 ~ + 2.7
Voltage at maximum power (Vmpp)	Volts	20
Current at maximum power (Impp)	Amps	5.03
Open circuit voltage (Voc)	Volts	22.10
Short circuit current (Isc)	Amps	5,53
Maximum system voltage (Vsyst)	Volts	715 (IEC)
Diodes (By-pass)	Quantity	2
Maximum series fuse	Amps	10
Efficiency (ηm)	%	13.25
Form Factor	%	≥ 73

LIGHTING		
Diffuser	Material	Polycarbonate
Light source	Type	High Brightness LED diode
Power	W	60
Voltage	Volts	12
Luminous flux	Lm/W	6000-6200
Color Temperature	k	3000/4000/5000/6000
Beam opening	º	65-148
Ambient temperature	ºC	- 30 ~ + 60
Switch	Type	On/Off
Life span	Hours	50,000

BATTERY		
Technology	Type	Internal Lithium Ion
Current	Amps	60
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

WARRANTIES OF QUALITY

Solar Innova products are made with the highest quality components and the latest technology, thanks to the excellent factory equipment and control of the entire manufacturing process. In addition, our products offer excellent design and finishes.

Solar Innova has a wide range of photovoltaic solar panels that cover all market needs both feeding operation as isolated facilities. Besides offering panels that develop, manufacture and market, we give you and your company the opportunity to advise you on everything you may require, through our engineering department.

Solar Innova has obtained in its factory a multitude of distinctive quality independent standardization bodies and control, demonstrating continued compliance with high standards of safety and quality in their products.

Outstanding quality, reliability above average and superior performance distinguish the Innova Solar modules. For this to continue to keep well, the modules are regularly a series of thorough tests and trials not only in the R & D and factory quality, but also through independent certification institutes.

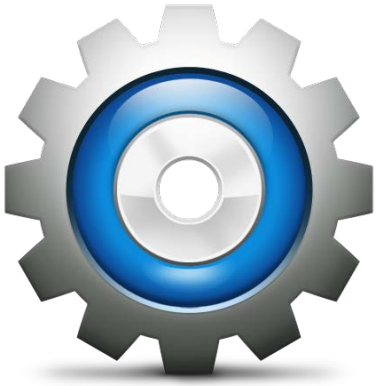
In Solar Innova, production efficiency and supreme quality contribute decisively to the high degree of international competitiveness.

The effectiveness and excellence in all our manufacturing processes are the main guarantee that ensures the highest quality solar modules Innova.

Our production factory (certified according to ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007) meets stringent quality requirements that our organization has set: full supervision in each individual phase of the production process.

The CE or European Conformity is a European brand for certain groups of services or industrial products. It relies on the directive 93/68/EEC, 2002/95/EC, 2004/108/EC and 2006/95/EC. It was established by the European Community and the testimony by the manufacturer that the product meets the minimum legal requirements and technical security of the Member States of the European Union.

SERVICES



Solar Innova is constituted by a team of highly qualified and specialized in renewable energy commitment to the implementation of clean energy to enable sustainable growth and a better future for all, not forgetting the fair return on its investors and customers.

The main advantage that report **Solar Innova** services comes from its professional and specialized management, which allows obtaining higher and safer returns, reducing risks, optimizing and streamlining processes and, above all, avoiding hassles and concerns to their clients. Have the same advantage, any company or person with a small investment, you will have access to investments in renewable energy, inexhaustible and clean.

Solar Innova, born with the firm purpose of contributing to a more sustainable future. Energy saving is the first way to combat the changes that are happening on our planet.

Alternative energy, now fully consolidated as a viable way to preserve the environment, is the only solution for eliminating pollution and CO2.

The world needs systems based on solar power with improved quality and efficiency. This is the definitive answer to a paradigm shift cleaner energy, sustainable and economically.

Besides thinking about how to produce clean energy, we must learn to make rational use of energy as a priority.

Full customer satisfaction is our commitment, and he devoted one hundred percent of our time and effort. We monitor daily performance and quality in products and services.

We have a rigorous internal quality control in order to offer the customer the best service.

DEALERS

We want to make sure your solar experience is fully satisfactory. This is why we have selected highly skilled dealers and installers around the world. Our Official Dealers and Installers will provide you with a professional installation job and a high-level customer service.

Consistent with our commitment of pushing forward existing quality requirements, we have drafted a Quality Charter for dealers and installers, that defines a series of rules aimed at guaranteeing the best quality of service to homeowners choosing Solar Innova products. Having signed our Quality Charter, Official Dealers and Installers prove to share the same vision of quality as us, and take responsibility for providing their clients with a better service.

Our Official Dealers and Installers have gone one step further, formalized by the signature of Solar Innova Letter of Commitment. Having your Solar Innova products installed by an Official Installer, you can enjoy the benefits of your home photovoltaic system with absolute peace of mind.

We want solar energy to be recognized as a prime choice for the generation of electricity and we believe the satisfaction of each and every of our customers is the best way to reach this goal.

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