Manufacturer of Solar PV Modules & other Solar Products and **Comprehensive EPC Solution Provider**





Solar Street Lights



We also manufacture

Solar ΡV **Panels**

Solar Water Controller Pumps

Solar

Pump

Lithium lon **Battery**

Solar Power Packs

Solar Charger Controller

Solar Home System

Solar Power Plants

DESCRIPTION

Himalayan Solar offers a wide range of Solar Street Lights with standard and custom-built versions. The standard models generally conform to MNRE specifications.

As soon as the sun rises in the morning, photovoltaic cells start generating electric power. This electric power is stored in the battery through charge controller in the luminary. As the sun sets in the evening, the photovoltaic cells stop power generation. The electric power stored in the battery is used for lighting the luminary during night.

Electronic charge controller and LED luminaires have electronic circuits. Electronic charge controller protects the battery from overcharge and deep discharge.



It also has the facility to protect from reverse polarity if battery connections are made by mistake in the reverse manner. MPPT Charge Controller in the luminary protects the battery from being over charged and keeps the battery in good health. If the battery is deep discharged then Red LED marked "LOW" will start glowing on the luminary and the same will be disconnected. The glowing green "LED" indicates battery charging. The Luminary works from Dusk to Dawn automatically switching on and off depending on voltage levels set.

General Specification

SOLAR BASED LED STREET LIGHT SYSTEM

System Voltage: 12 Volts DC

Solar PV module of 75Wp

Battery Lifepo4 12.8V/30AH with min 3.2V 10Ah Cell

• IP 65 Aluminium PDC LED Luminaire 12W max

MPPT Solar Charge Controller: 1 No

• Hot Dip GI Battery Box: 1 No

Module Mounting Frame suitable for 75 Wp Solar Panel

• Nuts/Bolts/Hardware/Cable



General Specification

SOLAR BASED LED HIGH MAST STREET LIGHT SYSTEM

• System Voltage: 12 Volts DC

Solar PV module of 110Wp: 4 Nos.

Battery Lifepo4 12.8V/50AH with min 3.2V 10Ah Cell: 4 Nos

• IP 65 Aluminium PDC LED Luminaire 22W max: 4 Nos

MPPT Solar Charge Controller: 4 Nos

• Hot Dip GI Battery Box: 1/2/4 Nos

Module Mounting Frame suitable for 110WpX4 Solar Panel: 1 No

Nuts/Bolts/Hardware/Cable: 1 Set

• CCTV Camera and Wifi HotSpot Dongle: Optional

• Power Source for CCTV Camera ie 1X30 Ah LiFePO4 Battery Pack + 1X60Wp Solar Panel + 1 CC : Optional

CONSTRUCTION FEATURES AND PROVISIONS

SPV Module

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- 1) 36/72 Nos. mono/poly crystalline solar cells in 12 V Configuration.
- 2) Laminated in EVA.
- 3) High Transmission toughened glass as superstate

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- 4) Anodized Aluminum Frames.
- 5) Terminal box with terminals.
- 6) Pmax minimum 75Wp (For Solar LED SLS) / 110Wp (For High Mast Solar LED SLS)

1) Type. of battery: 12.8V LiFePO4 Battery Pack

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- 2) Capacity: 1X30AH for Solar LED SLS and 4X50Ah for Solar LED HLS
- 3) Terminals: Two Wires

LED Luminaire

Battery

- 1) Aluminum IP 65 Luminary Cabinet with adequate heat dissipation
- 2) Lens can be used for LEDS or as needed
- 3) LED driver used is Boost Type Constant Current
- 4) Adequate protection against open circuit, short-circuit and reverse polarity.

Inbuilt MPPT Solar Charge Controller

- 1) MPPT Solar charge controller.
- 2) Constant current type LED driver.
- 3) Adequate protection against open circuit, short circuit and reverse polarity
- 4) LED indication for a. Load disconnect (Red LED) b. Charging in progress (Green LED).
- 5) Connection/Points for module and battery connection.
- 6) Solder free installation.
- 7) No load, short circuit, battery deep discharge, battery overcharge and reverse polarity protections.
- 8) Blocking diode to prevent reverse flow of current from battery to module.
- 9) Very low idle power consumption < 20 mA for standard models.

Module Mounting Frame

- 1) Comprises of members made from 35x35x5mm angle iron or as required.
- 2) Necessary Nut/Blots hardware.

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3) Degree Plate

*Module mounting structure can be made to varying designs as per actual site requirements

Cable

- 1) 1.5/2/2.5/4mm² twin core wire or any other size as per requirement.
- 2) Length as per requirement.
- 3) Insulated PVC cable.

LIGHT OUTPUT

For Solar Led SLS

- 24 Lux for each luminaire when measured from a height of 4m below the light at high illumination
- > 12 Lux for each luminaire when measured from a height of 4m below the light at low illumination
- 3. The light is glaze free and not have any shadow band.

For Solar Led High Mast SLS

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- 1. First 3 hours full light (min. 8.0 lux), 60% for next 3 hours (min. 5 lux) and rest of time at lower light (50%, min. 4 lux) level.
- 2. The lumens output of each luminaire should not be less than 2700 lumens.
- 3. The lux level over a 16 meter of radius should not be less than 5% at the point mentioned below in the lux level distribution chart. The average Lux should be min 8.0 lux and average/min = min 0.25.

Instruction for Use

INSTALLATION

- The Solar module/modules is/are to be installed at any place where shade free sun is available throughout the day on the pole. The solar PV modules is/are fixed in such a direction that it faces south at appropriate inclination. The solar PV modules can be installed as per indicative figure at the end which is self-explanatory.
- The PV modules, LED Luminary with inbuilt charge controller and the battery are connected. The appropriate cable size should be used for making these connections. Wiring has to be as per requirements.

Replacements

FUSE

Resettable Fuse is provided in the luminary.

BATTERY

The battery can be replaced by removing wires from PCB mounting terminals.

PRINTED CIRCUIT BOARD In case of faults in the PCB's (Driver and LED Card) of the luminary, these can be easily replaced by removing the connectors and unscrewing the mounting screws.

TROUBLE SHOOTING - If the system does not work, please ensure

- 1. That the module, charge controller, battery and the luminaires are connected in proper polarity. Make correct connection if found wrong.
- 2. That the fuses are intact in the charge controller of the luminary. If fuse is blown out, replace by new one.
- 3. Ensure that the lamp is OK.
- 4. Even then if the system does not work, call the technician to check up the PCB etc. for component level trouble shooting.

P.S.

- In case of any problem please contact the source from where you have procured the system.
- In case of any problem with the battery or SPV modules please write to the manufacturer with copy to us and the source from where you have procured the system. Battery and SPV modules carry the warranty of respective manufacturers also.
- Please note that the light output of lamp is dependent on temperature, direction of lamp. The Luminaries should be preferably used with lamp in horizontal position.
- If the system does not behave properly, kindly contact the source from where you have procured/nearest dealer



- > महीने में एक बार सोलर पैनल को साफ अवश्य करें।
- अावश्यकता न होने पर सिस्टम को बंद कर दें। ताकि सिस्टम की बैटरी ज्यादा खर्च ना हो।
- > याद रखें की सोलर पैनल पर पेड़ या किसी इमारत की छाया न पढ़ें। सोलर पैनल से बैटरी को कम से कम 8-10 घण्टे प्रतिदिन चार्ज करें।
- यदि आप लम्बे समय तक सिस्टम का उपयोग नहीं करते हैं तो बैटरी को फुल चार्ज करके ही उपयोग करे
- > Wash Your Panel once a month.
- Turn off the switch on the system if you don't use light USB charging Mobiles otherwise it will have the self power consumption
- > Make sure the solar panel are never shaded by trees & building
- > Please charge the Battery by solar panel 8-10 hours in a day.
- If you don't use the system lor long time please full charge it first before use.



- > सिस्टम को ज्वीनशील पदार्थों से दूर रखे। सिस्टम को न फेकें और न ही सिस्टम को गिरने दे।
- > सिस्टम का कोई भी हिस्सा बारिश में खुला न छोड़े।
- > सिस्टम को खोलकर बाँधने की कोशिश न करें।
- असिस्टम को 12V DC पर ही चलाएँ किसी भी हिस्से को AC 110V/220V से सीधा न जोड़ें।
- > सिस्टम को तेज हवा के समय पैनल को सावधानी पूर्वक रखें।
- > सोलर पैनल की केंबल को मजबुती से न खीचें। जिसके कारण जोड ढीले न हो
 - > Do not place the system near explosive or flammable objects
 - > Do not drastic crash or throw the solar panel.
 - > Keep the battery system away from water.
 - The LED Lamp is DC 12V, Can't be use with AC 110/220V, Otherwise it will break.
 - Do not install or handle the modules when they are wet or during periods of light wind.
 - Do not drag the cable of the solar panel strongly or it will come to poor contact.

क्या ना करे

क्या करें

Do

Do Not

• Product Technical Specifications

HS

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LED Wattage (W)	Panel Wattage (W)	System Voltage (V)	LiFePO4 Battery Capacity (Ah)
7	40	12	12
9	50	12	18
12	60	12	24
15	75	12	30
18	75	12	40
20	90	12	50
24	90	12	50
30	100	12	60

Sr. No.	Components	Specifications	
1	PV Module	75 Wp under STC	
2	Battery	12.8V, 30 AH capacity Lithium Ferro Phosphate battery.	
3	Light Source	White Light Emitting Diode (W-LED) 12 Watt LED Luminaire	
4	Light Out put	135 Lumens/ Watt Hi Efficacy LED with 24 Lux measurement at 4 m below the light Uniform Illumination Total luminous flux: ≥ 1500 lm. Luminous efficacy (i.e. system efficacy): ≥ 125 lm/W. Color Temperature: Between 5500 K to 6500 K. CRI ≥ 70 Batwing Distribution Uniformity as per IS 1944 IS 10322/IS 16101/IS 16102/IS 16103 and IS 16107 Compliant	
5	Electronics Efficiency	>90% Efficiency	
6	Duty Cycle	Dusk to Dawn with Dimming Option (Progammable)	
7	Autonomy	Min 36 Hours	
8	Ingress Protection – IP	Optical and Control gear compartment - IP 65 / IP 66	
9	Impact resistance of casing	≥ IK 08	
10	Radiated Emission Test	CISPR-15 Compliant	
11	ESD (Electro Static Discharge) and Radiated susceptibility test	As per IEC 61547	

SALIENT FEATURES

Constant current type LED driver Adequate
protection against open circuit, short circuit and reverse polarity

LED indication [Load disconnect Red LED and Charging in progress Green LED]

- Connection/Points for module and battery connection
- Solder free installation

No load, short circuit, battery deep discharge, battery overcharge and reverse polarity protection

Blocking diode to prevent reverse flow of current from battery to module

Very low idle power consumption < 20 mA for standard models



Battery Box

Manufacturer of Solar PV Modules & other Solar Products and Comprehensive EPC Solution Provider

Our Commitments

- O► Quality Products & Solutions
- O► Timely Delivery
- O► Cost Effectiveness
- O► Total Customer Satisfaction



Himalayan Solar Power Solution for a Shining Future

Manufacturing Units: - Plot No. 237, HSIIDC Industrial Estate, Alipur, Barwala, Panchkula 134118, Haryana, India - Plot No. 3 & 4, Khasra No. 249, Khewat No. 980 & 977, Near Aryakulam International School, Assandh – Kohand Road, Munak, Karnal, Haryana - 132040

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