



LS SOLAR PTE LTD

"Contributing to a greener world"



# SONNE

## Solar LED Street Lighting

# Innovative Solution For Solar Street Light System



- **We are pleasure to recommend you a high power and green energy solar led street light system .**
  - **Especially For who live grid -remote areas or public gird is inefficient place , High power Led street light + solar system no just bright a illumination , cost -less effective .what's more bright a happiness feeling .**
  - **please kindly consider it and making a conscious decision to save our environment through the use of renewable energy!**
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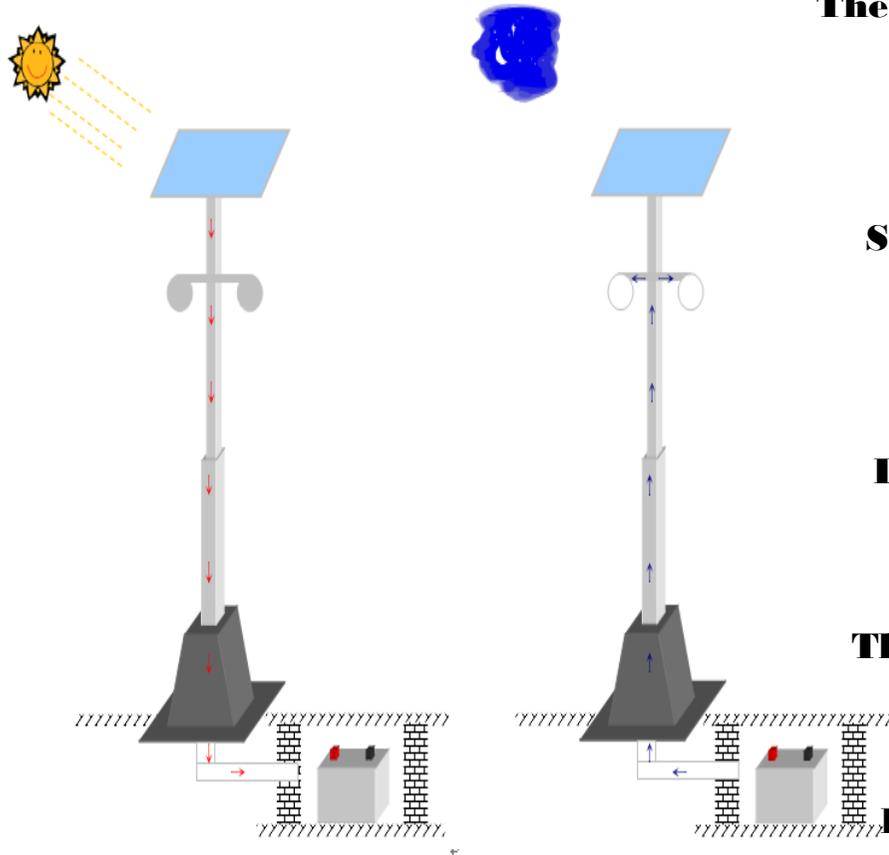
# Innovative Solution For Solar Street Light System

**Lighting plays a central role in the way people feel in and about their live condition. Good lighting provides safety for pedestrians and traffic, it helps to guard against crime and vandalism, and perhaps most importantly, it helps to create a positive image of a city, stimulating a sense of communal identity and pride.**

- **Main Solar Street Lighting Solution**

- **1. By combining existing knowledge of street lighting applications and our expertise in LED technology Offer complete High Power Led street Light system + solar energy**
- **2. Base on grid –remote areas or public gird is inefficient . We Offer the Grid –Connect First + Solar as back Up Led Solar Street Lighting System Solutions OR Solar first + Grid Electricity As back UP solar street light system solution**
- **3. After Midnight , When less traffic and People in the road . We offer Auto dimming option (half power and 1/3 power ) solution which helps to f optimize energy savings and cost –effective**
- **4. High Power Led Solar Street light not only offers greater flexibility and choice to municipalities, but are also environmentally friendly, consuming up to 60 % less energy than traditional street lighting and substantially lowering the energy consumption.**
- **LEDs have a longer lifespan than traditional lighting, which reduces maintenance and the associated costs. LEDs can be expected to last over 50,000 hours.**
- ~~We are sincerely hope do the best and suitable solution for you .~~

# Solar street light system



**The system converts the sun energy into electricity and stores it to provide green illuminance**

**Solar Street lighting System include  
Solar panel +Solar charge Controller /Regulator  
+ Led Street Light +Battery+ Solar module  
mounted structure + Battery box + Pole**

**Luminaries utilize High Power white LEDs with  
superior thermal management design.**

**These extremely durable fixtures are waterproof and  
designed for multiple outdoor applications**

**Luminaries are supplied fully assembled & ready  
for either retrofit or new installations.**



# Innovative solution for Solar street light system

- **Benefits:**
    - Easy installation no wiring required.
    - Installing and moving is easy no more waiting for the utility company!
    - Proven technology. Vandal and theft-resistant components and hardware. All parts are corrosion resistant.
    - Low installation cost.
    - Easily and quickly deployed in almost any location.
    - NO wiring run from the grid.
    - NO cuts through existing roads, sidewalks or landscaping.
    - NO Maintenance.
    - NO Utility bill.
    - Maintenance Free Batteries!
    - Big Credits and Savings form State and Federal Taxes.
    - Better Color Rendition & Nighttime Visibility.
    - No Warm-Up or Cold Start Problems.
    - Solar panel Component lifetime of 25 years.
  - **2year warranty for complete system**
  - **Application: City streets, pavements, squares, schools, parks, yards, inhabitanacy areas, factories and some other places where need lighting.**
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# 7w Led Bulb light + Solar Energy



## **Solar garden light**

**Model : SSLD7w**

- 1. Solar module : 20Wp /12VDC**
- 2. Solar Module Support Structures : 20Wp /12VDC**
- 3. Battery: Free-maintained lead-acid battery 24AH/12V**
- 4. Battery Box : 24AH/12V**
- 5. Controller/regulator :10A/12VDC**
- 6. Light Source High Power LED Bulb 7w \*1pcs**  
( luminous flux: 700 LM, is equal to 60 watt incandescent )
- 7. Cable and other install material**
- 8. Metal Pole : 2 m---3m**
- 9. Work Temp : -40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 6-8 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 8w Led Bulb light + Solar Energy



## **Solar garden light**

**Model : SSLD8w**

- 1. Solar module : 25Wp /12VDC**
- 2. Solar Module Support Structures : 25Wp /12VDC**
- 3. Battery: Free-maintained lead-acid battery 24AH/12V DC**
- 4. Battery Box : 24AH/12VDC**
- 5. Controller/regulator : 10A/12VDC**
- 6. Light Source High Power LED Bulb 4w \*2pcs**  
( luminous flux: 800 LM, is equal to 2pcs \* 11w compact fluorescent bulb )
- 7. Cable and other install material**
- 8. Metal Pole : 2 m---3m**
- 9. Work Temp : -40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 6-8 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 10w Led Flood light + Solar Energy



## **Solar garden light**

**Model : SSDL10w**

- 1. Solar module : 30Wp /12VDC**
- 2 Solar Module Support Structures : 30Wp /12VDC**
- 3. Battery: Free-maintained lead-acid battery 38AH/12V DC**
- 4. Battery Box : 38AH/12VDC**
- 5.Controller/regulator :10A/12VDC**
- 6. Light Source: High Power Flood light 10w \*1pcs  
( luminous flux: 1000 LM)**
- 7. Cable and other install material**
- 8. Metal Pole : 3.5-4 m**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 6-8 Hours/per day . Keep 3 rain days**

## **Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 15w Led Street Light + Solar Energy



## **Solar Street light**

**Model : SSDL15w**

- 1. Solar module : 50Wp /12VDC**
- 2 Solar Module Support Structures : 50Wp /12VDC**
- 3. Battery: Free-maintained lead-acid battery 65AH/12V DC**
- 4. Battery Box : 65AH/12VDC**
- 5. Controller/ Regulator :10A/12VDC**
- 6. Light Source: High Power Flood light 15w  
( luminous flux: 1500 LM)**
- 7. Cable and other install material**
- 8. Metal Pole : 3.5-5 m**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 20w Led Street Light + Solar Energy



## **Solar Street light**

**Model : SSLD20w**

- 1. Solar module : 80Wp /12VDC**
- 2 Solar Module Support Structures : 80Wp /12VDC**
- 3. Battery: Free-maintained lead-acid battery 65AH/12V DC**
- 4. Battery Box : 65AH/12VDC**
- 5. Controller/ Regulator :10A/12VDC**
- 6. Light Source: High Power Street Light 20w /12VDC  
( luminous lumen: 1800-2000 LM)**
- 7. Cable and other install material**
- 8. Metal Pole : 5 m -6m**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 30w Led Street Light + Solar Energy



## **Solar Street light**

**Model : SSLD30w**

- 1. Solar module : 60Wp /12VDC \*2pcs**
- 2 Solar Module Support Structures : 60Wp /12VDC \*2pcs**
- 3. Battery: Free-maintained lead-acid battery 65AH/12V DC  
\*2pcs**
- 4. Battery Box : 65AH/12V DC \*2pcs**
- 5. Controller/ Regulator :10A/24VDC**
- 6. Light Source: High Power Street Light 30w /24VDC  
( luminous lumen: 2700-3000LM ,the center lux :22lux )**
- 7. Cable and other install material**
- 8. Metal Pole : 6m-7meter**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 30w Led Street Light + Solar Energy



## **Solar Street light**

**Model : SSLD30w**

- 1. Solar module : 50Wp /12VDC \*2pcs**
- 2 Solar Module Support Structures : 50Wp /12VDC \*2pcs**
- 3. Battery: Free-maintained lead-acid battery 65AH/12V DC  
\*2pcs**
- 4. Battery Box : 65AH/12V DC \*2pcs**
- 5. Controller/ Regulator :10A/24VDC**
- 6. Light Source: High Power Street Light 30w /24VDC  
( luminous lumen: 2700-3000LM ,the center lux :22lux )**
- 7. Cable and other install material**
- 8. Metal Pole : 6m-7meter**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :  
4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 30w Led Street Light + Solar Energy



## **Solar Street light**

**Model : SSLDW30w**

- 1. Solar module : 60Wp /12VDC \*2pcs**
- 2.Solar Module Support Structures : 60Wp /12VDC \*2pcs**
- 3.Wind Turbine + Wind Controller**
- 4. Battery: Free-maintained lead-acid battery 65AH/12V DC \*2pcs**
- 5. Battery Box : 65AH/12V DC \*2pcs**
- 6. Controller/ Regulator :10A/24VDC**
- 7. Light Source: High Power Street Light 30w /24VDC  
( luminous lumen: 2700-3000LM ,the center lux :22lux )**
- 8. Cable and other install material**
- 9. Metal Pole : 9-10meter, Light are install at the 6meter Point**
- 10. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 11. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 40w Led Street Light + Solar Energy

## High Power Led Solar Street Light

**Model : SSLD40w**

- 1. Solar module : 65Wp /12VDC \*2pcs**
- 2 Solar Module Support Structures : 65Wp /12VDC \*2pcs**
- 3. Battery: Free-maintained lead-acid battery 65AH/12V DC \*2pcs**
- 4. Battery Box : 65AH/12V DC \*2pcs**
- 5. Controller/ Regulator :10A/24VDC**
- 6. Light Source: High Power Street Light 40w /24VDC**  
( luminous lumen: 3600-4000LM ,the center lux :22lux )
- 7. Cable and other install material**
- 8. Metal Pole : 7m-8meter**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**



# 50w Led Street Light + Solar Energy



## High Power Led Solar Street Light

**Model : SSLD50w**

- 1. Solar module : 80Wp /12VDC \*2pcs**
- 2 Solar Module Support Structures : 80Wp /12VDC \*2pcs**
- 3. Battery: Free-maintained lead-acid battery 80AH/12V DC \*2pcs**
- 4. Battery Box : 80AH/12VDC \*2pcs**
- 5. Controller/ Regulator :10A/24VDC**
- 6. Light Source: High Power Street Light 50w /24VDC  
( luminous lumen: 4500-5000LM ,the center lux :22lux )**
- 7. Cable and other install material**
- 8. Metal Pole : 7 m -8m**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

# 60w Led Street Light + Solar Energy



60 w Led VS 400w sodium



## High Power Led Solar Street Light

**Model : SSLD60w**

- 1. Solar module : 100Wp /12VDC \*2pcs**
- 2. Solar Module Support Structures : 100Wp /12VDC \*2pcs**
- 3. Battery: Free-maintained lead-acid battery  
100AH/12V DC \*2pcs**
- 4. Battery Box : 100AH/12V DC \*2pcs**
- 5. Controller/ Regulator :15A/24VDC**
- 6. Light Source: High Power Street Light 60w /24VDC  
  
( luminous lumen: 5400-6000LM ,the center lux :28-30lux  
base on 8meter )**
- 7. Cable and other install material**
- 8. Metal Pole : 8 m -9m**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

# 60w Solar LED Street Light Project



**Led light power : 60W**

**Color Temp : 5000K**

**Recommend Height : 9 meter**

**Recommend Space : 25 -28 meter**

# 70w Led Street Light + Solar Energy

## High Power Led Solar Street Light

**Model : SSLD70w**

- 1. Solar module : 120Wp /12VDC \*2pcs**
- 2 Solar Module Support Structures : 120Wp /12VDC \*2pcs**
- 3. Battery: Free-maintained lead-acid battery  
120AH/12V DC \*2pcs**
- 4. Battery Box : 120AH/12V DC \*2pcs**
- 5. Controller/ Regulator :20A/24VDC**
- 6. Light Source: High Power Street Light 70w /12VDC**  
  
**( luminous lumen: 6300-7000LM ,the center lux :28lux base  
on 9meter )**
- 7. Cable and other install material**
- 8. Metal Pole : 8 m -10m**
- 9. Work Temp : -40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**



**Basic Solar Irradiation :**

**4 kWh/m<sup>2</sup>/day--- 5 kWh/m<sup>2</sup>/day**

# 100 W Led Street Light + Solar Energy



## High Power Led Solar Street Light

*Model : SSLD100w*

1. Solar module : 160Wp /24VDC \*2 pcs
2. Solar Module Support Structures : 160 Wp /24VDC \*2 pcs
3. Battery: Free-maintained lead-acid battery  
150AH/12V DC \*2pcs
4. Battery Box : 150AH/12V DC \*2pcs
5. Controller/ Regulator :20A/24VDC
6. Light Source: High Power Street Light 100w /24VDC

( **luminous lumen: 9000-10,000LM ,the center lux :28-30lux base on 9meter )**

7. Cable and other install material
8. Metal Pole : 10 m -12 m
9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h
10. Operate time : 10 -12 Hours/per day . Keep 3 rain days

# 70 W Led Street Light + Wind + Solar Energy



## **High Power Led Solar +Wind Street Light Model : SSLDW70w**

- 1. Solar module : 50Wp /12VDC \*2 pcs**
- 2.Solar Module Support Structures : 50Wp /12VDC \*2 pcs**
- 3.Wind turbine: 400W /24VDC**
- 3. Battery: Free-maintained lead-acid battery  
150AH/12V DC \*2pcs**
- 4. Battery Box : 150AH/12V DC \*2pcs**
- 5. Controller/ Regulator :20A/24VDC**
- 6. Light Source: High Power Street Light 70w /24VDC  
  
( luminous lumen: 6300-7,000LM ,the center lux :28-30lux  
base on 8 meter )**
- 7. Cable and other install material**
- 8. Metal Pole : 9 m -10 m**
- 9. Work Temp : --40° C~55° C .Wind-Stand > 120km/h**
- 10. Operate time : 10 -12 Hours/per day . Keep 3 rain days**

# Solar Streetlight System Sizing Worksheet

**Your basic request information will help us design the best reliable and cost -less effective Solution for you !!**

## System Requirements

The height of pole :

3-5m  6m  7m  7-8m  8-9m  other \_\_\_\_\_

The working hours /day of streetlight :

06h  08h  10 h  12 h  other \_\_\_\_\_

The Power source :

complete solar  solar + AC grid  solar + wind  other \_\_\_\_\_

The Road width \_\_\_\_\_ and Space between to pole

Solar module support structures: (*circle one*)  fixed on pole  on the top of pole Pole Diameter\_\_\_\_\_

Days of battery storage required: (*if known*) \_\_\_\_\_days

Is corrosion a problem (i.e. salt air)? (*circle one*) Yes No

## Site Information (Where will this solar street system be located?)

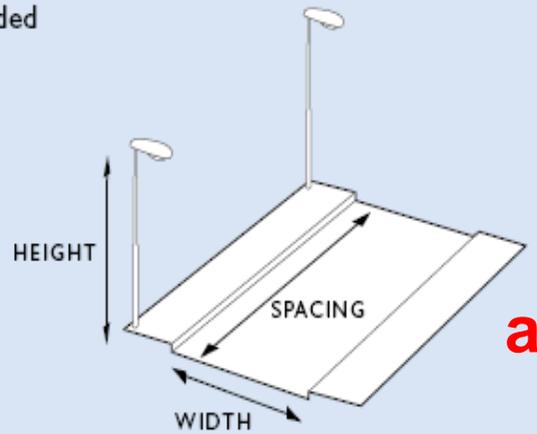
Nearest Major City\_\_\_\_\_State/Province\_\_\_\_\_Country\_\_\_\_\_

Latitude\_\_\_\_\_Longitude\_\_\_\_\_ (*if available*)

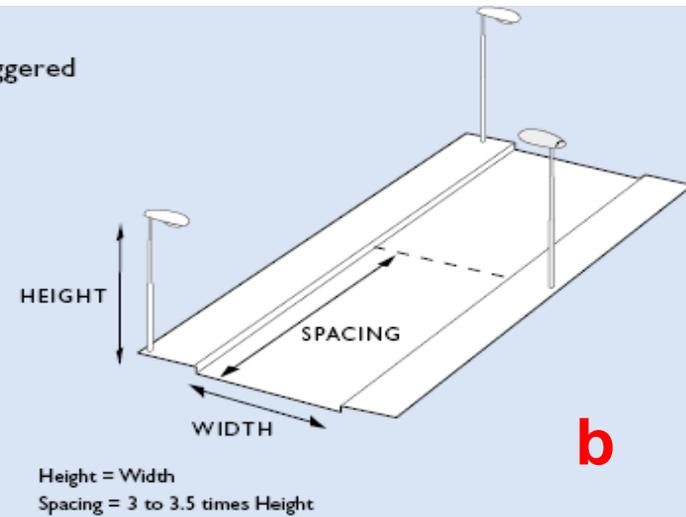
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# Basic Lighting Arrangements

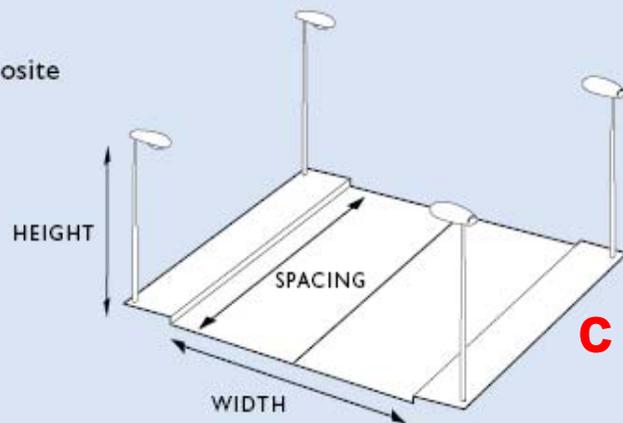
Single sided



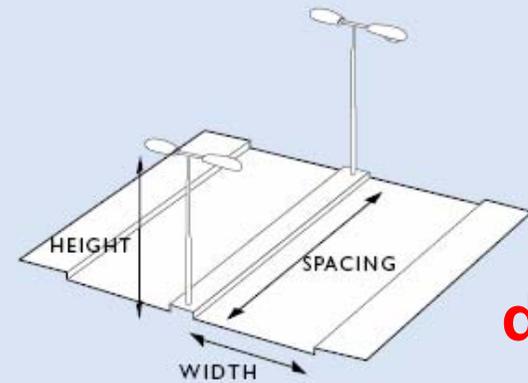
Staggered



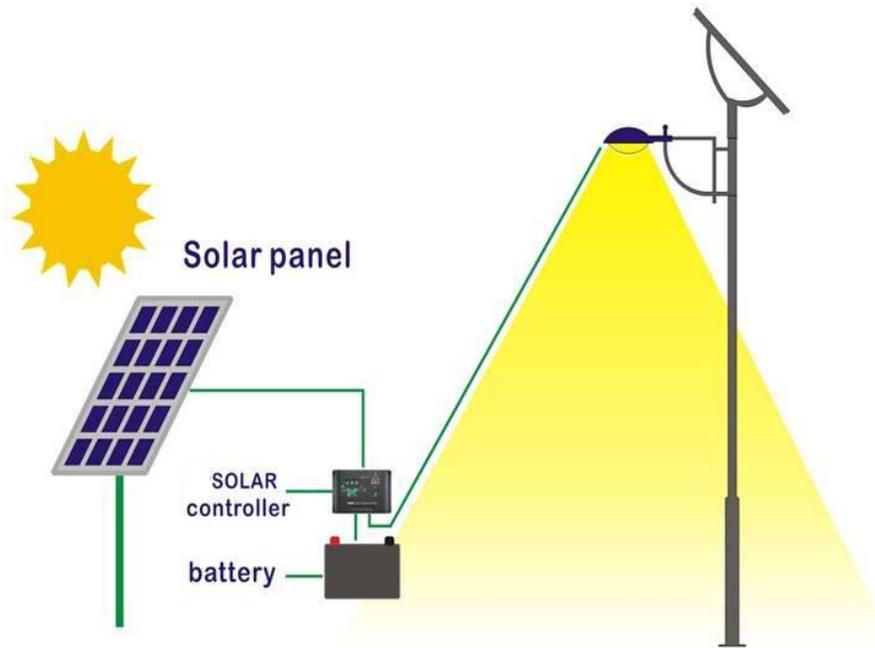
Opposite



Central



# Solar Charger Controller



**Model : 10A 12VDC ,  
Model : 10A /12VDC Auto 24VDC**

**Model :15A /12VDC  
Model : 15A /12VDC Auto 24VDC**

**Model :20A /12VDC  
Model : 20A /12VDC Auto 24VDC**

1. **fully soiled state charge controller with PWM regulation,**
2. **guaranteeing an extended lifetime, with voltage drop optimized and sized down across the circuits. The charge regulator has a three tier charging algorithm with boost, absorption and float charge the batteries,**
3. **after a deep cycle, and after disconnection e.g. maintenance checks.**
4. **The will boost charge interval can be set to user specified parameter + fully automatic microprocessor controlled regulation**
5. **Light control and timer control automatic .**

# Panel



- **They have a life of 25 years..**
- **Manufactures under the ISO9001 control procedure, each module are laminated between glass and tedlar, which allow them to operate with a lower junction temperature**
- **Technical specification: -36 multicrystalline silicon cells connected in series - encapsulating:**
- **EVA -front face: tempered glass -back face :tempered Tedlar -self-supporting frame in anodized aluminum Product test:**
- **-Test certificate of CE ,IEC UL .**
- **Labeling and identification: Each module is provided with a permanent label which legibly identify**

Specification	Peak Power	Peak Voltage	peak Current	Open Circuit Voltage	Short-Circuit Current	Net Weight	Gross Weight
	Wp	V	A	V	A	kg	kg
50W (17) P660×630×25	50	17.5	2.86	22	3.1	5.0	6.0
60W (17) P770×660×35	60	17.5	3.43	22	3.8	6.1	7.3
65W (17) P770×660×35	65	17.5	3.71	22	4.1	6.1	7.3
80W (17) P1010×660×35	80	17.5	4.57	22	5.1	8.4	10.0
100W (17) 1110×660×35	100	17.5	5.71	22	6.3	9.4	11.2
120W (17) P1470×680×35	120	17.5	6.86	22	7.4	13.2	16.0

# Acid – Lead Free Maintenance Battery



**Battery banks: Gel free maintenance Lead-Acid Battery Batteries have been specially designed to ensure in total safety an uninterruptible supply of energy during low sun shining periods and during the night.**

**Their good resistance in cycling and the low water consumption permit a long life expectancy with reduced maintenance.**

**•insulated and bolted connectors**

**•Insulation of connectors and terminals ensures personnel safety**

**•The manufacture of this range is in fully compliance with the ISO9001 standard and UL And CE approved**

<b>Model</b>	<b>Specification</b>	<b>Size (mm)</b>	<b>Weight</b>
<b>RA12-40</b>	<b>12V40AH</b>	<b>198*166*171(171)</b>	<b>13.5</b>
<b>RA12-65</b>	<b>12V65AH</b>	<b>350*167*180(183)</b>	<b>21</b>
<b>RA12-80</b>	<b>12V80AH</b>	<b>350*167*180(183)</b>	<b>24</b>
<b>RA12-100</b>	<b>12V100AH</b>	<b>328*172*222(222)</b>	<b>30</b>
<b>RA12-120</b>	<b>12V120AH</b>	<b>407*177*225(225)</b>	<b>35.5</b>
<b>RA12-150</b>	<b>12V150AH</b>	<b>483*170*240(240)</b>	<b>44.5</b>
<b>RA12-200</b>	<b>12V200AH</b>	<b>522*240*219(240)</b>	<b>60</b>

# Wind Turbine



**Wind Turbine : 200W ,400W**

**Voltage : 12V or 24VDC**

**rated wind speed (m/s) :12**

**start-up wind speed (m/s) :2.5**

**Materil of Blades :Aluminum Alloy**

**Thank you**

*We believe in Powering Sustainable Growth.*



THANK YOU!  
THANK YOU!

**LS Solar Pte. Ltd.**



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