# DSC
**Energía Solar**

## Off Grid Solar Power System & Solar Garden Street Light



Quality designed home power systems for off the grid for all areas of the country and at all price levels. The systems on this page are all "stand alone" systems, capable of producing electricity from solar energy and storing it for use when the sun is not shining.

**Our design team can also customize a complete system** unique to your specific application.

Meet daily lighting and appliance electricity demand with Free solar power



ROCK Design

# Leader In Solar Energy Efficient Lighting

## All-in-one™

## Solar LED Garden & Street Light

# Leader In Solar Energy Efficient Lighting

## All-In-One 15/20/30/40W Solar Street Light - NightHawk/NightEyes



Special Design All in One Solar LED Street Light

- Mono Silicon Panel 18% Photoelectric Conversion Efficiency
- Ajustable Panel Angle
- Maximum Efficiency of Solar Energy Conversion
- 360° Rotary
- Dimmer and timer
- Bridgelux 45mil LEDs 50000 hours lifespan
- LiFePO4 Battery ≥2000 Cycles Easy Replace

**Feature**
1. Two main parts only, lighting fixture and solar panel, nice design of integrated all in one solar street lighting
2. Battery & charge controller integrated in lighting fixture
3. Adjustable solar panel angle for best solar energy conversion
4. 5 -7 years life LiFePO4 batteryEasy
5. Installation in minutes, maintenance free and no battery theft

- Smart controller dim light to extend lighting time when battery low

- Built-in 360 degree micro sensor regulates light output automatically.

- Remote control with 4 pro-grammed lighting mode for application selection

 4 Lighting mode from Remote control

 L: 100%  - 1 hr, 70% - 3 hrs, 20% - dawn

 T: 100%  - 5 hr, 50% - 7 hrs (dawn)

 M: 50%   - 1 hr, 100% - 3 hrs, 20% - dawn

 U: 100%  - 2 hr, 60% - 2 hrs, sensor lighting, 20% standby, 60% motion sensed

 Default at L Mode in factory,  USE Remote control to set



| Model No.: | WS-616-15W | WS-616-20W | WS-616-30W | WS-616-40W |
|---|---|---|---|---|
| LED Lamp: | 15W  2400 lm | 20W  3200 lm | 30W 4800 lm | 40W 6400 lm |
| Color temperature: | 6500 K | | | |
| Solar Panel: | 50 Watt MONO Crystalline | 65 Watt  MONO Crystalline | 80W MONO Crystalline | 100W Mono crystalline |
| LiFEPO4 Battery: | 170WH | 212WH | 340 WH | 424 WH |
| Material: | Aluminum alloy | | | |
| Installation : | 5m ~ 8m | | | |
| Full Charge: | 12h per night | | | |
| Protections: | Over Charge & Over discharge | | | |
| Distance of poles: | 8 – 10 meter | | | |
| Switch: | Manual Off-Auto | | | |

# Leader In Solar Energy Efficient Lighting

## All-In-One ™ 8/12W Solar Moon Light

**Feature:**
- Solar light integrates all components for outdoor lighting.
- Easy, quick installation, maintenance free.
- Mount on pole or wall.
- Built-in 360 degree micro sensor regulates light output automatically.
- Smart charge controller plus remote control
- Work mode:

  4 Lighting mode from Remote control

  L: 100% - 1 hr, 70% - 3 hrs, 20% - dawn (default )

  T: 100% - 5 hr, 50% - 7 hrs (dawn)

  M: 50% - 1 hr, 100% - 3 hrs, 20% - dawn

  U: 100% - 2 hr, 60% - 2 hrs, sensor lighting, 20% standby, 60% motion sensed

| Model No.: | WS-609-R8W | WS-609-R12W |
|---|---|---|
| LED Lamp: | 8W | 12W |
| Color temperature: | 6500K as standard. | 6500K as standard. |
| Solar Panel: | 20 Watt  MONO Crystalline | 40 Watt  MONO Crystalline |
| Battery: | 3.2V /  20Ah LiFePO4 battery pack | 9.6V /  10Ah LiFePO4 battery pack |
| Micro Sensor: | 6-10 m | 6-10 m |
| Material: | Aluminum alloy for lighting housing | Aluminum alloy for lighting housing |
|  | Aluminum frame for solar panel | Aluminum frame for solar panel |
| Installation : | 3m ~ 6m | 3m ~ 6m |
| Full Charge: | Max. 12h per night | Max. 12h per night |
| Protections: | Over Charge & Over discharge | Over Charge & Over discharge |
| Distance of poles: | 8 – 10 meter | 8 – 10 meter |
| Switch: | Manual Off-Auto | Manual Off-Auto |

## Solar Garden Light 5W LED Auto dim off

- Solar garden light Compact "All in one" with polycrystalline solar panel, Lithium Battery, LED, charge controller and sensor detector.
- Anchors and screws for Wall and post.
- The Lamp works in a low consumption Mode, but if the presence sensor detects Movement hu man turns to the lamp brightness. After 1 minute The Lamp Detection without human Returns to saving mode.
- Operation: with the Switch in the on position, The Lamp turns on automatically at night (This State is detected by the Panel to produce Energy), The Lamp on For 8 h
- Brightness: 5W: 500 lumens / 1 - 1.5 W: 150 - 240 lumens

Model No.: WS-610
1. Polycrystalline solar panel 5w 9V
2. Battery: Lithium (LiFePO4) 3 Ah / 6.4 V
3. LED: 5W (64 LEDs).
4. Infrared sensor Angle: up to 140. REACH 6 - 10 m
5. Charging Time: 6h with direct Sun
6. On / Off Button.
7. Work temperature: - 20 to + 60 C Degrees:
8. Optimum installation: 2 - 4 meters height separation between lamps 6 - 8m.

# 5W LED ALL IN ONE SOLAR LIGHT

## All-In-One ™ 5W LED Solar Security Light

**Feature:**
- Solar light to position where you want it.
- Integrates all components within one housing body.
- Easy & Quick installation.
- Brighter light when you need it.
- Built-in infra-red motion sensor regulates light output automatically.
- Work mode: Lighting on for 1 min when motion sensed, normally off.

| | |
|---|---|
| Model No.: | WS-612 |
| LED Lamp: | 64 Super White LED 5 Watt  (6500 K) |
| Flux. | Bright mode: 500 lm |
| Solar Panel: | 2 Watt Amorphous silicon |
| Battery: | 7.4V / 2 Ah Li-ion battery pack |
| PIR Sensor: | 6-10 m |
| Material: | ABS plastic housing for outdoor environment |
| | Different Color available, golden, grey, coffee |
| Installation : | 2m ~ 3.5m, wall or pole |

**Installation options**
Decks, fences, entrances to homes.
Areas that we want to keep Lit
Security or Scare away Intruders.
Camping, caravans, Boats.
Access to garages, warehouses or Farms.
Areas of pedestrian Passage.
Lighting boxes, Doors, locks.
Enlightenment of Flower Beds, Fountains, figures or garden areas.
Inability to reach places with electrical wire.

## All-In-One ™ 5W LED Solar Yard Light

**Aluminum housing**

**Feature:**
- Solar light integrates all components within one housing body.
- Easy, quick installation, maintenance free.
- Built-in infra-red sensor regulates light output automatically.
- Lighting mode: Regular lighting at 30% brightness, 100% brightness for 1 min when motion sensed. 8 hours per night.

| | |
|---|---|
| Model No.: | WS-604S |
| LED Lamp: | 64 Super White LED 5 Watt (6500 K) |
| Solar Panel: | 8 Watt Poly Crystalline |
| Dimension: | 367 X 205 X 55 mm |
| Battery: | 6.4V / 4.5 Ah LiFePO4 battery (5 years) |
| PIR Sensor: | 6-10 m |
| Material: | Aluminum housing with rust-proof coating |
| | Plastic & Glass Construction for solar panel |
| Installation : | 2m ~ 4m |
| Full Charge: | Max. 8 h per night |
| Protections: | Over Charge & Over discharge |
| Illuminating : | 6m (Maximum Radius) |
| Switch: | Manual Off-Auto |

Surface mount

Pole mount

## All-In-One ™ Remote Control 5W LED Solar Light

**Feature:**
- Solar light integrates all components within one housing body.
- Easy, quick installation, maintenance free.
- Built-in PIR sensor regulates light output automatically.
- 8 hours of lighting per night
- Two lighting options by remote control



**Remote control**

### Surface mount



### Pole mount



| Model No.: | WS-604SR |
|---|---|
| LED Lamp: | 64 Super White LED 5 Watt (6500 K) |
| Flux. | Bright mode: 400 lm |
| Solar Panel: | 8 Watt Poly Crystalline |
| Dimension: | 367 X 205 X 55 mm |
| Battery: | 6.4V / 4.5 Ah LiFePO4 battery pack (5 years) |
| PIR Sensor: | 6-10 m |
| Material: | Aluminum housing with rust-proof coating |
|  | Plastic & Glass Construction for solar panel |
| Installation : | 2m ~ 4m |
| Backup: | 8 hours of lighting / night<br>Yard lighting per night, 2 nights<br>or sensor light for 8 hours |
| Protections: | Over Charge & Over discharge |
| Illuminating : | 6m (Maximum Radius) |
| Switch: | Manual Off-Auto / Remote control |

## All-In-One ™ 8W LED Solar Security Light

**Feature:**
- Solar light to position where you want it.
- Integrates all components within one housing body.
- Easy & Quick installation.
- Brighter light when you need it.
- Built-in infra-red motion sensor regulates light output automatically.
- Work mode: Lighting on for 1 min when motion sensed, normally off.

**Aluminum housing**

Surface mount

Pole mount

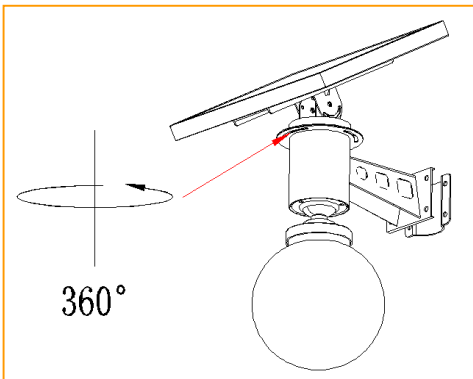| | |
|---|---|
| Product Code.: | WS-602S |
| LED Lamp: | 112 Super White LED 8 Watt |
| Solar Panel: | 3 Watt amorphous silicon |
| Dimension: | 367 X 205 X 55 mm |
| Battery: | 7.4V / 2000mAh Lithium-ion battery pack |
| PIR Sensor: | 6-10 m |
| Material: | Metal housing with anti rust coating |
| | Plastic frame for solar panel |
| Installation : | 2m ~ 4m |
| Full Charge: | up to 80 times of lighting @ 1 min |
| Protections: | Over Charge & Over discharge |
| Illuminating: | 6m (Maximum Radius) |
| Switch: | Manual Off-Auto |

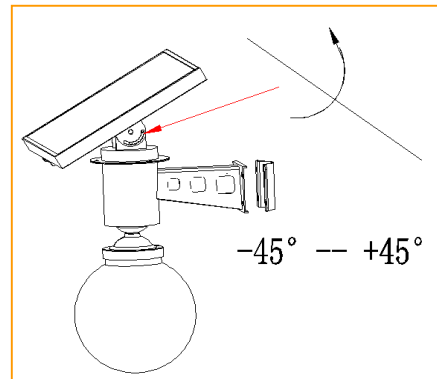## All-In-One ™ 5W Solar Ball Light

**Feature:**

- Solar light integrates all components for outdoor lighting.
- Easy, quick installation, maintenance free.
- Mount on pole or wall.
- Built-in 360 degree micro sensor regulates light output automatically.
- Work mode: Constant light @ 30% brightness. 100% brightness when motion sensed , back to 30% brightness when people are away. Max 12 hours per night.

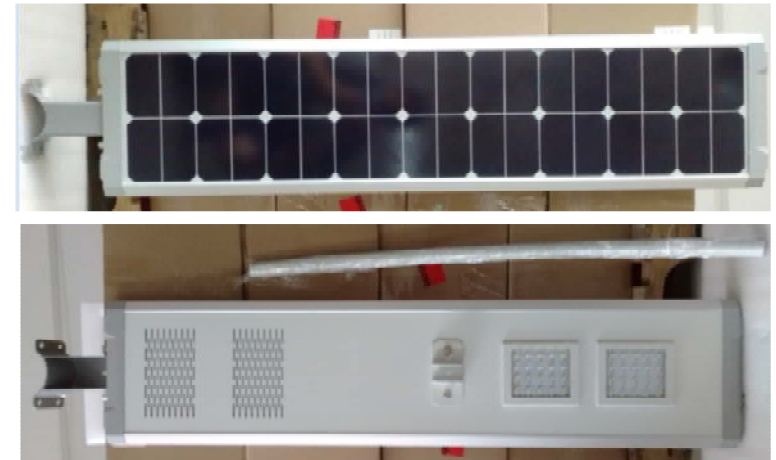| | |
|---|---|
| Model No.: | WS-608 |
| LED Lamp: | 5W |
| Color temperature: | 6500K as standard. |
| Solar Panel: | 10 Watt Poly Crystalline |
| Battery: | 3.7V / 12Ah Li-ion battery pack |
| Micro Sensor: | 6-10 m |
| Material: | Metal housing with rust-proof coating |
| | Aluminum frame for solar panel |
| Installation : | 2m ~ 4m |
| Full Charge: | Max. 12h per night |
| Protections: | Over Charge & Over discharge |
| Illuminating : | 6m (Maximum Radius) |
| Switch: | Manual Off-Auto |



360°

Solar panel direction

−45° −− +45°

Solar panel tilt

### Construction
- Fully integrated solar street light from simplified & cast aluminum housing design optimize the construction to keep the stability and low cost.
- Air-flow through heat sink design provides perfect heat management, waterproof design, lighter and keep stronger construction.
- Smooth and glossy processing with natural clean system prevents debris build-up and minimizes wind loading.
- Economic self contain street lighting fixtures ready for installation right out of the box.
- Each fixture can be retrofitted to an existing pole in no time.
- Intelligent PIR sensor for dusk to dawn operation, Brightness automatically switched by smart charge controller management.
- Universal mounting bracket enables mounting on variety of poles.

### LED & Optics
- Eutectic led packaging technology is applied for low heat resistance, low light degradation, high efficiency and long life (Projected L70>50000h @ Ta 25C). High efficiency Pure white (6500-7000K)
- Precise integrated optic lens in high intensity PC material with IESNA Type I provides high uniformity and optimal luminaire spacing, the optical system optimizes the light distribution, eliminate the waste of light, increase the reasonable and effective using of light.
- **Electronics** -  IP 68 waterproof charge controller / Sensor / connector
- **Battery**  - 2000 cycles LiFePO4 battery from qualified supplier, stable quality performance
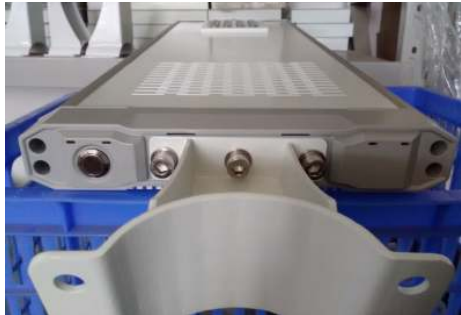
## 10W/15W/20W/25W/30W LED ALL IN ONE STREET LIGHT ROCK DESIGN

| Product Code | WS-603-10W-ROCK | WS-603-15W-ROCK | WS-603-20W-ROCK |
|---|---|---|---|
| LED Watt<br>LED CHIP | 10<br>(LED chip Bridgelux USA) | 15<br>(LED chip Bridgelux USA) | 20<br>(LED chip Bridgelux USA) |
| LED lumen max. | 1000-1100 | 1500-1650 | 2000-2200 |
| Solar panel | 20W SUNPOWER MONO | 30W SUNPOWER MONO | 40W SUNPOWER MONO |
| Battery (AH/V) | 9AH / 12.8V LiFePO$_4$ | 15AH / 12.8V LiFePO$_4$ | 18AH / 12.8V LiFePO$_4$ |
| Life span (battery cycle) | 2000 | 2000 | 2000 |
| Lighting mode | 12 hours / night,<br>20-30% brightness as constant lighting, 100% brightness for 45s or 1 min @ motion sensed.<br>6-8 hours full charge by sun<br>Lighting mode can be customized. | | |
| Backup | 24 hours | 24 hours | 24 hours |
| Housing Material | Aluminium alloy | Aluminium alloy | Aluminium alloy |
| PIR sensor | YES | YES | YES |
| Operating temp | -20°C to +60°C | -20°C to +60°C | -20°C to +60°C |
| Lamp Color temp. | 6500K (Cool white) | 6500 K (Cool white) | 6500 K (Cool white) |
| Install height | 3-5 m | 4-6 m | 4-6 m |
| Best Pole height | 4-5.5m | 5-6 m | 5-6 m |
| Pole Diam. | 60-110mm | 70-110mm | 70-110mm |
| Pole distance | 12m | 15 m | > 15 m |
| Dimensions | 580 x 310 x 55 mm | 805 x 310 x 55 mm | 900 x 310 x 55 mm |
| Protection | IP 65 (EN60529 compliant) | IP 65 (EN60529 compliant) | IP 65 (EN60529 compliant) |

## 10W/15W/20W/25W/30W LED ALL IN ONE STREET LIGHT ROCK DESIGN

| Product Code | WS-603-25W-ROCK | WS-603-30W-ROCK |
|---|---|---|
| LED Watt<br>LED CHIP | 25<br><br>(LED chip Bridgelux USA) | 30<br><br>(LED chip Bridgelux USA) |
| LED lumen max. | 2500-2650 | 3000-3300 |
| Solar panel | 50W SUNPOWER MONO | 60W SUNPOWER MONO crystalline |
| Battery (AH/V) | 21AH / 12.8V LiFePO$_4$ | 24AH / 12.8V LiFePO$_4$ |
| Life span (battery cycle) | 2000 | 2000 |
| Lighting mode | 12 hours / night,<br>20/30% brightness as constant lighting, 100% brightness for 45s /1 min @ motion sensed.<br>6-8 hours full charge by sun<br>Lighting mode can be customized. | |
| Backup | 24 hours | 24 hours |
| Housing Material | Aluminium alloy | Aluminium alloy |
| PIR sensor | YES | YES |
| Operating temp | -20°C to +60°C | -20°C to +60°C |
| Lamp Color temp. | 6500 K (Cool white) | 6500 K (Cool white) |
| Install height | 4-6 m | 5-7 m |
| Best Pole height | 5-6 | 5.5 m |
| Pole Diam. | 70-110mm | 70-110mm |
| Pole distance | > 18 m | > 25 m between poles |
| Dimensions | 1150 x 310 x 55 mm | 1260*310*55mm |
| Protection | IP 65 (EN60529 compliant) | IP 65 (EN60529 compliant) |

### Applications

- Street
- Parking Lots
- Arenas
- Public places
- Commercial space
- Bus stops
- Recreation area
- Parks
- Schools
- Hospitals

# Leader In Solar Energy Efficient Lighting

## Applications

- Street
- Parking Lots
- Arenas
- Public places
- Commercial space
- Bus stops
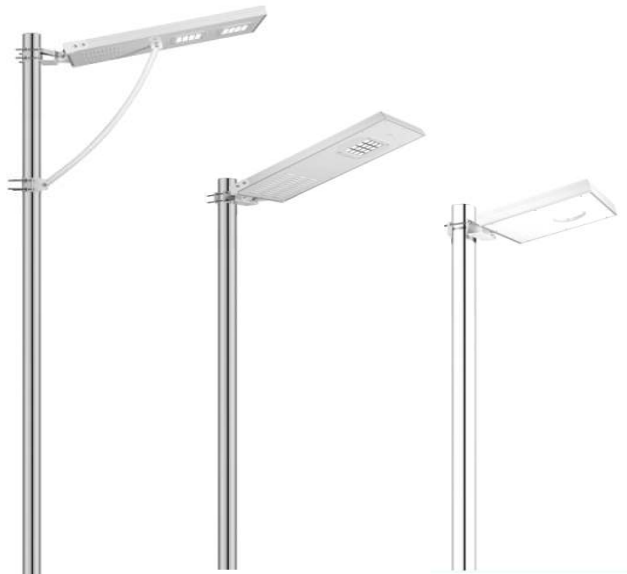- Recreation area
- Parks
- Schools
- Hospitals

## Full All-in-One Solar Street Light – Square design

### General specification:
* Manufactured by ISO 9001: 2000 Quality assured facility
* Over load/ Over charge / Over discharge / short circuit protection
* Charge temperature: -0 to +60 degree Celsius
* Discharge temperature -20 to 60 degree Celsius
* Rust proof enclosure with IP65 for water and rust protection

### Key features:
* In-bulit LiFePO4 battery with min. 5 years life
* Intelligent sensor for dusk to dawn operation
* Brightness automatically switched by charge controller management.
* 2 days battery back up proving high reliability in cloudy weather
* Universal mounting bracket enables mounting on variety of poles

• Economic self contain street lighting fixtures ready for installation right out of the box.
• Each fixture can be retrofitted to an existing pole in no time.
• Complete range from 5W LED to 60W LED built on the same design concept.

# Leader In Solar Energy Efficient Lighting



| Product Code | WS-603-40W - MA | WS-603-40W - MA |
|---|---|---|
| LED Watt | 40 | 40 (50) |
| LED lumen max. | 4000-4400 | 4000-4400 (5000-5500) |
| Solar panel | 75/80W | 80W |
| Battery (AH/V) | 30AH / 12.8V LiFePO$_4$ | 33AH / 12.8V LiFePO$_4$ |
| Life span (battery cycle) | 2000 | 2000 |
| Lighting mode | 12 hours / night , Dim mode 30% brightness , bright mode 100% for one minute when motion sensed | 12 hours / night , Dim mode 30% brightness , bright mode 100% for one minute when motion sensed |
| Backup | 24 hours | 24 hours |
| Housing Material | Aluminium alloy | Aluminium alloy |
| PIR sensor | YES | YES |
| Operating temp | -20°C to +60°C | -20°C to +60°C |
| Lamp Color temp. | 6500 K (Cool white) | 6500 K (Cool white) |
| Install height | 5-7 m | 5-7 m |
| Pole Diam. | 70-110mm | 70-110mm |
| Pole distance | 25 m | 25 m |
| Dimensions | 1170 X 430 X 55 mm | 1170 X 430 X 55 mm |

# Leader In Solar Energy Efficient Lighting

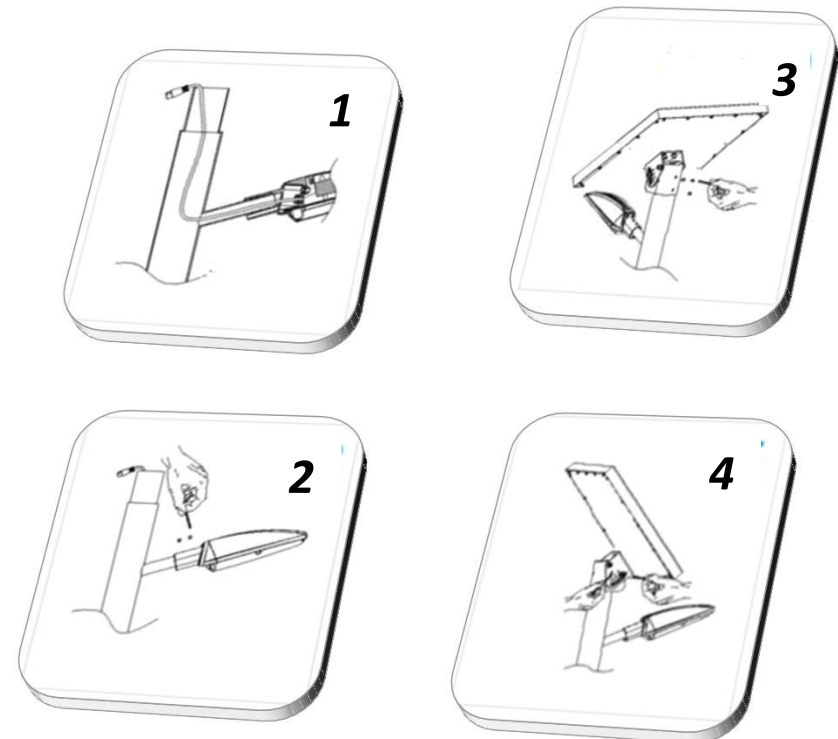| Product Code | WS-603-60W –EU / O | WS-603-80W-O |
|---|---|---|
| LED Watt | 60 | 80 |
| LED lumen max. | 6000-6600 | 8000 |
| Solar panel | 90/100 W MONO crystalline | 115/130W MONO crystalline |
| LiFePO$_4$ Battery (AH/V) | 28 AH / 19.2V OR 42AH 12.8V | 54 AH / 12.8V |
| Life span (battery cycle) | 2000 | 2000 |
| Lighting mode | 12 hours / night , Dim mode 30% brightness , bright mode 100% for one minute when motion sensed | 12 hours / night , Dim mode 30% brightness , bright mode 100% for one minute when motion sensed |
| Backup | 24 hours | 24 hours |
| Housing Material | Aluminium alloy | Aluminium alloy |
| PIR sensor | YES | YES |
| Operating temp | -20°C to +60°C | -20°C to +60°C |
| Lamp Color temp. | 6500 K (Cool white) | 6500 K (Cool white) |
| Install height | 5-7 m | 5-7 m |
| Pole Diam. | 70-110mm | 70-110 |
| Pole distance | > 25 m | > 30 m |
| Dimensions | 1300 X 430 X 55 mm 1080 X 450 X 153 mm | 1185 X 590 X 153 mm |

## II Piece All-In-One Solar Street Light

### Key features:
* In-bulit LiFePO4 battery with minimum 5 years life
* Intelligent sensor for dusk to dawn operation
* Brightness automatically switched by charge controller management.
* 2 days battery back up proving high reliability in cloudy weather
* Universal mounting bracket enables mounting on variety of poles

### General specification:
* Manufactured by ISO 9001: 2000 Quality assured facility
* Over load/ Over charge / Over discharge / short circuit protection
* Charge temperature: -0 to +60 degree Celsius
* Discharge temperature -20 to 60 degree Celsius
* Rust proof enclosure with IP65 for water and rust ingress protection

Solar panel

Battery & Controller In housing

LED Lamp

Lamp Arm

Supporting pipe

Mounting

1

2

3

4

| Product Code | WS-605S-18W | WS-605S-24W | WS-605S-30W |
|---|---|---|---|
| LED lamp (watt) | 18 | 24 | 30 |
| Solar panel (watt) | 50 | 60 | 80 |
| Battery capacity | 24AH /12.8V | 30AH /12.8V | 40AH /12.8V |
| Lighting mode | 12 hours / night<br>2 hour of 40% power<br>4 hours of 100% power<br>6 hours of 40% power | 12 hours / night<br>2 hour of 40% power<br>4 hours of 100% power<br>6 hours of 40% power | 12 hours / night<br>2 hour of 40% power<br>4 hours of 100% power<br>6 hours of 40% power |
| Backup time | 24 hours | 24 hours | 24 hours |
| Operating temp | -20°- 60°C | -20°- 60°C | -20°- 60°C |
| Color temp. | 6500K (cool white) | 6500K (cool white) | 6500K (cool white) |
| Pole Diam. | 76-80 mm | 76-80 mm | 76-80 mm |
| Install height | 4-5 m | 4-6 mm | 4-6 m |
| Pole distance | > 15 m | > 18 m | > 25 m |

This specification is based on average 4-5 hrs of peak sunshine for good climate.
For high latitude countries and sunshine condition vary different from seasons, we propose other specification and lighting mode to suit local application.