



**Enviro Energy Solutions Ltd**  
**Your Gateway to the Sun**

# **SOLAR STREET LIGHTS**

## **EA2SL Series**

**...BECAUSE WITH ENVIROENERGY SOLUTIONS THE SUN SHINES FOR EVERYONE...**



Version 010618

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**ENVIROENERGY SOLUTIONS ES Ltd** is proud to present its new 2018 Solar Street Lights, that revolutionize solar street lighting: the **ESL2 series**.

The **innovation of the ESL series Solar Street Lights** is that it combines the advantages and simplicity of All-in-One type solar street lights with the efficiency and adaptability of the classic, multi part solar street lights, that come in separate pieces (Solar panel. Light, battery, charge controller).

The **superiority of the ESL series** is that it does not have the restraints and limitations of the All-in-One or the Classic types of solar street lights.

With a capacity from **20w to 70w** and **3000 Lumens to 12000 Lumens**, delivering over 190lm/w, the new **ESL series** is the best solution for every street lighting project.

### EA2SL Series General features:

- **Very High Output LED lights with up to 210lm/w**
- **Exceptional Quality Materials**  
Die cast aluminium body Integrally moulded and Bridgelux LED chips up to 190lm.
- **Exceptional Product Design**  
Streamlined Unibody structure with “Granite Look” surface treatment.
- **Flexible installation location**  
Can be installed anywhere thanks to the independent rotation and angle adjustment of the solar panel and the lamp
- **Customizable Solar Module Capacity**  
High output Mono Crystalline modules with cell efficiency>19% in order to reduce panel size, can be can be increased or decreased depending on the project requirements. The solar panel has an 80%, 25-year linear warranty.
- **Expandable Storage Capacity**  
Longer life span Deep cycle Lithium batteries capacity can be expanded to meet any project requirments.
- **Highly Aesthetical Product**  
With a streamlined body that looks like it is made of granite rock, compact dimensions, the minimized size solar panel, and an RGB tail light for decoration, the ESL series blends-in every landscape.



## A. EA2SL SERIES TECHNICAL SPECIFICATIONS

### 1. EA2SL Series General Specifications

- ◆ Deep Cycle Li-ion Battery
- ◆ High efficiency Monocrystalline solar panel
- ◆ Bridgelux LED chip - Life time  $\geq 50.000$  hours
- ◆ LED chip Up to 190Lm/w
- ◆ Beam Angle of 140x70 degrees
- ◆ Input Voltage: 18VDC
- ◆ Output Voltage: 24VDC
- ◆ Power Factor: 0.95
- ◆ Solar charging time of only 5-10 hours depending on module (customizable upon request)
- ◆ Lighting time per day: up to 12 hours per day (customizable upon request battery)
- ◆ Storage for days without enough radiation: up to 5 days (customizable upon request)
- ◆ Installation height up to 25m (depending on model)
- ◆ Inclination and rotation of panel and light: independent
- ◆ Working temperature:  $-20^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$
- ◆ Working humidity: 10% to 97%
- ◆ Storage temperature:  $0^{\circ}\text{C}$  to  $+6^{\circ}\text{C}$
- ◆ Waterproof class: IP65
- ◆ Material: Die Cast Aluminium alloy + PMMA

### 2. Technical Specifications of Standard Range models

EA2SL Technical Specifications of Standard models							
Model	EA2SL 3000	EA2SL 4000	EA2SL 5000	EA2SL 6000	EA2SL 8000	EA2SL 10000	EA2SL 12000
Li-Ion Battery	12V/18Ah	12V/24Ah	12V/28Ah	12V/36Ah	12V/42Ah	12.8V/65Ah	12V/86Ah
High Efficiency Mono Module	18V / 40W	18V / 50W	18V / 65W	18V / 80W	18V / 100W	18V / 150W	18V / 200W
Installation Height	3-5 meters	4-6 meters	5-7 meters	6-8 meters	7-8 meters	8-9 meters	9-10 meters
Lamp Dimensions (mm)	620(L) 231(I) 378(h)	620(L) 231(I) 378(h)	620(L) 231(I) 378(h)	620(L) 231(I) 378(h)	620(L) 231(I) 378(h)	620(L) 231(I) 378(h)	620(L) 231(I) 378(h)
Net Weight (kg)	10,2	10,6	10,9	11,2	11,4	10	10

## B. ADVANTAGES OF THE EA2SL SERIES COMPARED TO OTHER STREET LIGHTS

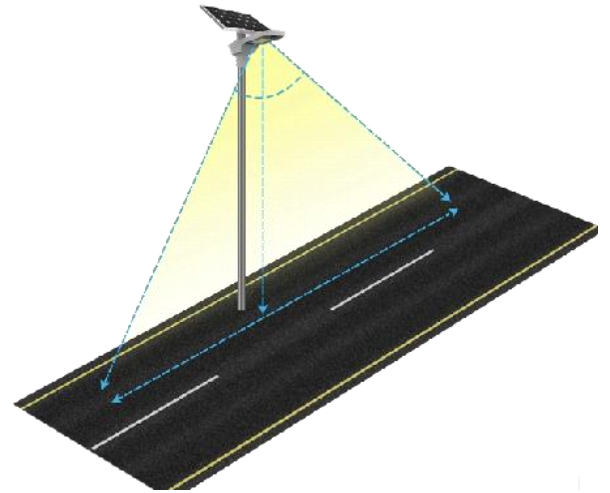
### 1. Comparison between EA2SL series and other types of Solar Street Lights

COMPARISON EA2SL SERIES vs OTHER TYPES OF SOLAR STREET LIGHTS			
	Classic Solar LED Lights	All-in-One type	EA2SL Series
Number of Pieces	4	1	2
Independent rotation of solar panel and light	Yes	No	Yes
Flexible Installation, can it be installed under any circumstances	Yes	No	Yes
Quick and easy Installation	No	Yes	Yes
Flexible Storage capacity	Yes	No	Yes
Flexible module capacity	Yes	No	Yes
Does the light require to be taken down for service	Yes	Yes	No
Constant Working time at Full Power	Over 12h (Customizable storage capacity)	6-10 hours (fixed storage capacity)	Over 12h (Customizable storage capacity)
Brightness	Usually up to 180 lm/w	Usually up to 180 lm/w	Up to 190 lm/w
Aesthetical	No	Yes	Yes
Specialized Labour required	Yes	No	No
Motion Sensor	Extra piece	Yes	Yes
Installation Time	<u>Long installation time:</u> Requires concrete box for burring of battery or hanging it on pole - Many separate parts to mount and connect and wire with possible mistakes	<u>Very short:</u> No separate parts, no wiring, no mistakes	<u>Very short:</u> requires only to plug the lamp to the panel. No possibility of mistakes. Plug and play
Installation Cost	High due to labour costs: specialized labour required for electrical connections and longer installation time	Very Low: no specialized labour and very short installation time	Very Low: no specialized labour and very short installation time
Lamp Body Material	Aluminium	Aluminium + Plastic multi piece assembly	Die Cast Aluminium

## 2. Other advantages

### Wide Beam Angle

Unique Lens with **140x70 degree** beam angle that provides much wider effective lighting area compared to traditional solar lights (when mounted at the same height).



### Easy Access for Servicing

To replace the battery just unscrew the lamps back cover to take out and replace the battery box. To replace the LED chip just unscrew the lamp top cover replace the chip and close the lid. There is no need to unload the lamp from the pole).

### Remote Control Model

Demo mode + 4 Different Working Modes, by light or Time, at 100% or with dimming possibility for longer working hours, and/or PIR motion sensor control.



### RGB Tail Light Decoration

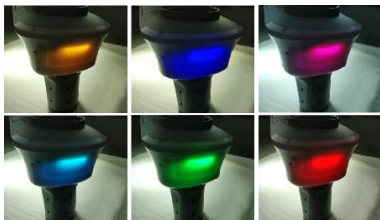
6 different colours turn-ON in turns to give the light a distinctive colourful edge that, can be switched-off if not needed.

### C. EA2SL SERIES COMPONENTS

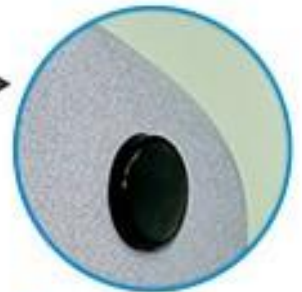
360° adjustable angle bracket to incline and orientate the module in any direction independantly of the light.



RGB Tail Light Decoration with 6 different colours that turn-ON in turns to give the light a distinctive colourful edge that, can be switched-off if not needed.



- Monocrystalline Solar Panel with 19% Photoelectric conversion efficiency
- Anti PID (Potential Induced Degradation) design
- Snow/Wind load or 5400/2400Pa
- 25 year progressive warranty



- PIR Sensor
- Sensing range up to 12m

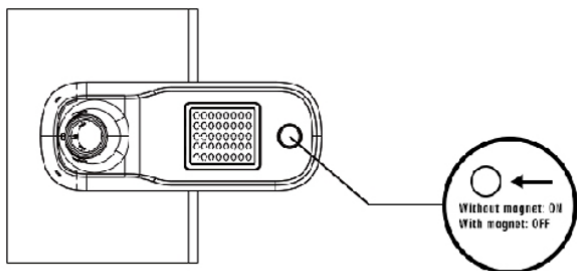
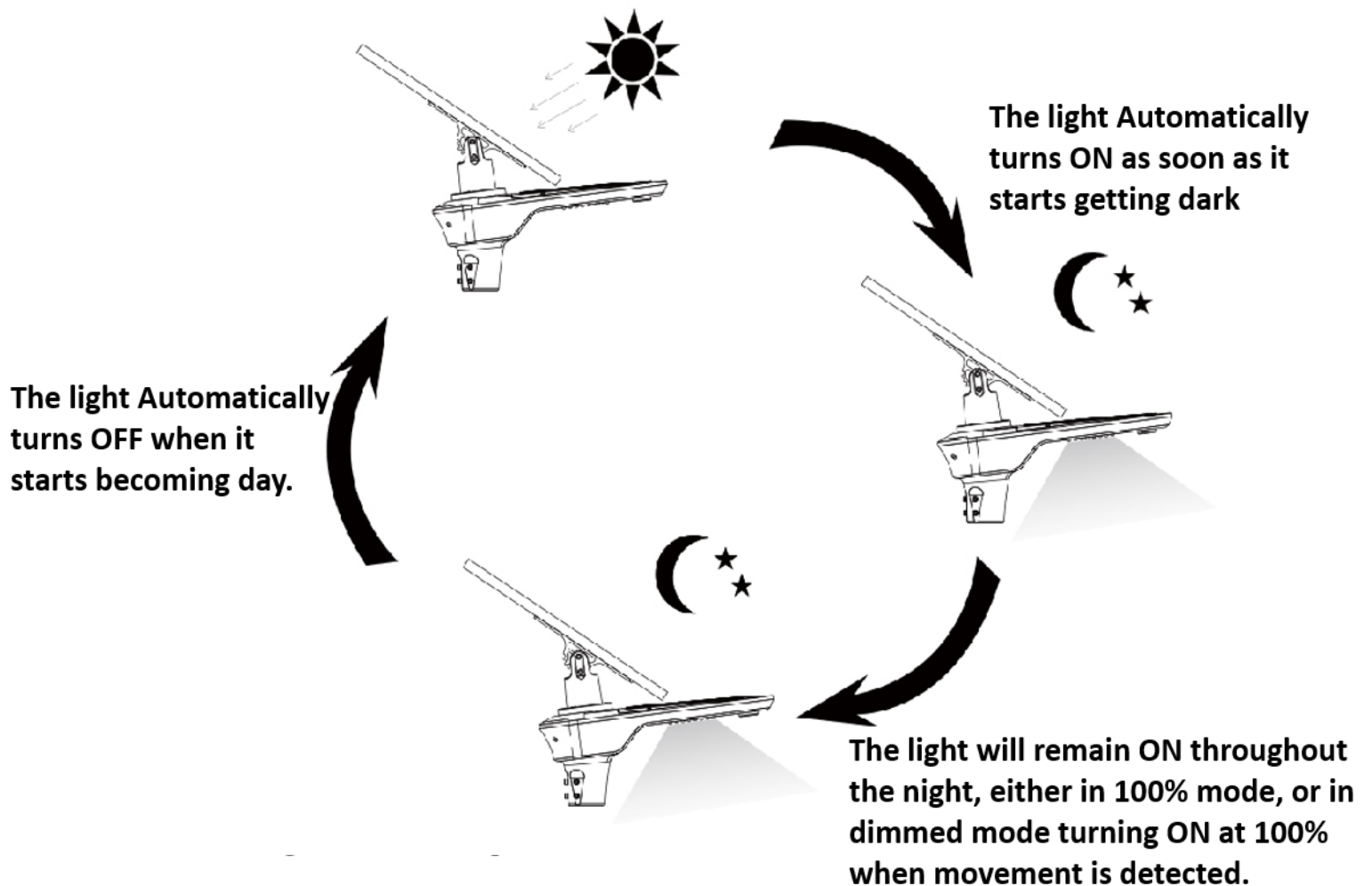


- Bridgelux LED Chip
- Output up to 190 Lm/w
- Excellent Colour Consistency
- Brightness Decay as low as 3%



## D. EA2SL FUNCTION PRINCIPLE

During the day, the light is switched OFF and the batteries are charged by the Sun.



The internal battery is factory sealed for safe shipment. The magnetic iron sheet must be taken off to unlock the battery and lighting system.





# Enviro Energy Solutions Ltd

## Your Gateway to the Sun

**We do not inherit the earth  
from our fathers,  
We borrow it  
from our children..."**



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