



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

# **SOLAR STREET LIGHTS**

## **EA2SL SPLIT 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 2019 Solar Street Lights, that revolutionize solar street lighting: the **EA2SL SPLIT Series**.

The **innovation of the EA2SL SPLIT Series Solar Street Lights** is that it combines the advantages and simplicity of All-in-One two solar street lights with the efficiency and adaptability of the classic, multi part solar street lights, that come in 4 separate pieces (Solar panel, Light, battery, charge controller).

The **superiority of the EA2SL SPLIT Series** is that it does not have the restraints and limitations of the All-in-One or the Classic types of solar street lights, but has all their advantages and much more.

With a capacity from **20w to 60w** and **3000 Lumens to 10000 Lumens**, delivering over 170lm/w, the new **EA2SL SPLIT Series** is a Highly Adaptive solution for every street lighting project.

### EA2SL SPLIT Series General features:

- **Very High Output LED lights with up to 170lm/w**
- **High Quality Materials**  
Die cast aluminium body and Bridgelux LED chips up to 170lm.
- **Modern, Ultra Flat Smart Design**  
Unique design for smart temperature control to protect the battery charging/discharging in high temperatures
- **Flexible installation location**  
Can be installed anywhere since the Lamp integrating the controller and batteries, is completely independent for the Solar Module and is fixed on the pole itself.
- **Variable Solar Module Capacity**  
Solar module power output can vary according to project requirements and multiple modules can also be combined. All modules are covered by a 25-year progressive warranty.
- **Expandable Storage Capacity**  
Longer life span Deep cycle Lithium batteries capacity can be expanded to meet any project requirements.
- **Highly Aesthetical Product**  
With an ultra flat body and compact dimensions, integrating the battery and controller, EA2SL Split series blends-in every landscape.



## A. EA2SL SPLIT SERIES TECHNICAL SPECIFICATIONS

### 1. EA2SL Split Series General Specifications

- ◆ Deep Cycle Li-ion Battery
- ◆ High efficiency Polycrystalline solar panel
- ◆ Bridgelux LED chip - Life time  $\geq 50.000$  hours
- ◆ LED chip Up to 170Lm/w
- ◆ Beam Angle of 120x70 degrees
- ◆ Input Voltage: 12VDC
- ◆ Output Voltage: 12VDC
- ◆ Solar charging time: depending on module and lamp (customizable upon request)
- ◆ Lighting time per day: Adaptive lighting system to achieve all night lighting and further customizable upon request to meet any project requirements.
- ◆ Storage for days without enough radiation: up to 5 days (customizable upon request)
- ◆ One step Plug and Play wiring connection
- ◆ Installation height up to 8-9m (depending on model)
- ◆ Inclination and rotation of panel and light: independent
- ◆ Working temperature:  $-25^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$
- ◆ Working humidity:  $> 90\%$
- ◆ Storage temperature:  $0^{\circ}\text{C}$  to  $+6^{\circ}\text{C}$
- ◆ Waterproof class: IP65
- ◆ Material: Aluminium alloy + Tempered Glass

### 2. Technical Specifications of Standard Range models (customizable)

EA2SL Split Technical Specifications of Standard models						
Model	EA2SL Split 20	EA2SL Split 30	EA2SL Split 40	EA2SL Split 60	EA2SL Split 80	EA2SL Split 100
Deep Cycle Li-Ion Battery*	12V/18Ah	12V/22Ah	12V/30Ah	12V/40Ah	12V/57Ah	12V/63Ah
High Efficiency Poly Module*	40W	50W	80W	100W	150W	150W
Lamp Output	3500 Lm	5100 Lm	6800 Lm	10.000 Lm	13.200	16.500
Installation Height	3-5 meters	4-6 meters	5-7 meters	6-8 meters	7-8 meters	7-9 meters
Lamp Dimensions (mm)	600(L) 250(l) 120(h)	600(L) 250(l) 120(h)	600(L) 250(l) 120(h)	600(L) 250(l) 120(h)	600(L) 250(l) 120(h)	600(L) 250(l) 120(h)
Net Weight (kg)	5,0	5,2	5,4	7	8,5	10

\*Solar Module and Battery are customizable as per customers request

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

### 1. Comparison Between Traditional Lights and Solar LED Street Lights

COMPARISON BETWEEN TRADITIONAL STREET LIGHTS AND SOLAR LED STREET LIGHTS		
	Traditional Street Lights	Solar LED Street Lights
<b>Installation Time</b>	Heavy and Time consuming (Digging of Trenches, cabling on many kilometres, etc...)	Very Easy and Quick (No Trenches, No Cabling)
<b>Installation Cost</b>	Average installation cost range between \$2.000 and \$15.000 depending on the distance to power source	No trenching, No cabling. Just one hole, one pole and the light is installed. Lower installation costs make the solar street light's initial investment same or lower than traditional lights
<b>Equipment Cost</b>	On average \$300 to \$600 less initial investment	Higher initial cost per lamp due to solar panel, and energy storage
<b>Running Costs</b>	Average Electricity costs \$80 to \$120 per street light annually	Free Natural Power
<b>Maintenance</b>	Higher maintenance costs: <ul style="list-style-type: none"> <li>• New lamp every 3000 to 5000 hours</li> <li>• Transmission lines power loss and maintenance costs/km/year: to \$4 to \$5</li> </ul>	Virtually maintenance Free. Light life expectancy rated 50.000 hours. No Transmission line power loss or maintenance costs
<b>Environmental</b>	Average street light consumes 550kWh of fossil fuel energy per year which translates to 235kg of CO <sub>2</sub> emissions. Light glare, trespass and pollution.	100% free green renewable energy from the Sun. Reduced glare, trespass and sky glow. No light pollution.
<b>Safety</b>	Because the energy of the traditional lamp adopts AC current, during 10-year usage the armoured cables begin to age and can pose very serious safety problems	The solar lamp adopts low voltage DC current with a max. of 24V. and can hardly pose any safety risk
<b>Security</b>	Low colour rendering and recognition	Full spectrum light allows for better brightness and colour recognition
<b>Portability</b>	In case of portable light towers, these rely on noisy generators that require service and attention	Solar counterpart is quiet and maintenance free

## 2. Comparison EA2SL Split series and other types of Solar Street Lights

COMPARISON EA2SL SPLIT SERIES vs OTHER TYPES OF SOLAR STREET LIGHTS			
	Classic Solar LED Lights (Separate Light+ Module+ battery+ Controller)	Average All-in-One type	EA2SL Split 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)
Working Hours per Day	Customizable	6-8 hours	Adaptive lighting system to achieve all night lighting
Aesthetical	No	Yes	Yes
Specialized Labour required	Yes	No	No
Working Days Without Light	Customizable	Up to 4 days	Up to 5 days and can be Further Customizable
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	Aluminium Alloy

### C. EA2SL SPLIT SERIES COMPONENTS



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



- **MPPT Solar Charge Controller**



- **High Power Lithium Battery**
- **Long Life Cycle >2000 Cycles**

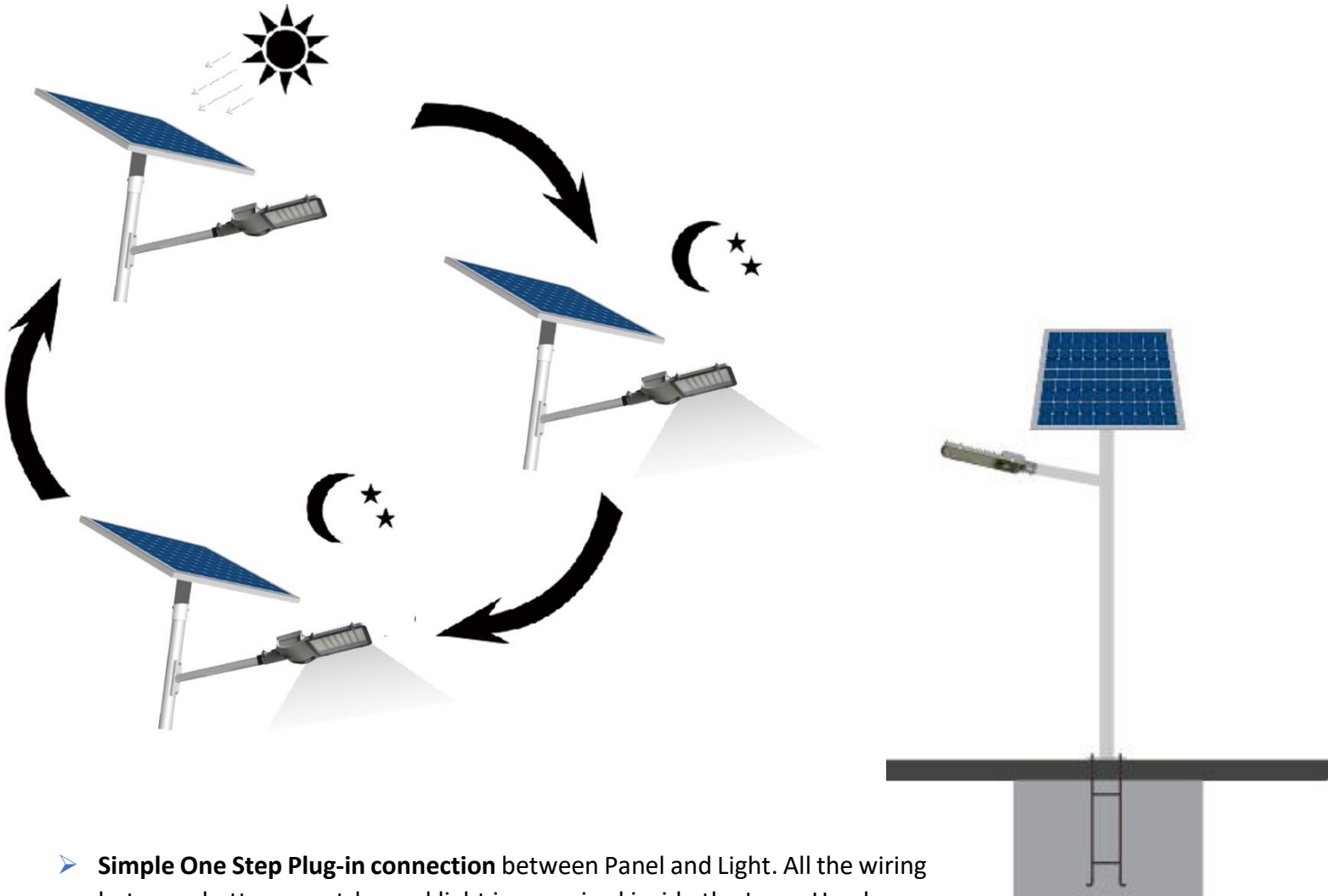
- **Uniquely Designed Remote Control** with 6 functions and 4 Different Modes of Operation: by light intensity, by Time, On/Off or With Diming, etc...



- **High Efficiency Monocrystallin or Polycrystalline Solar Module**



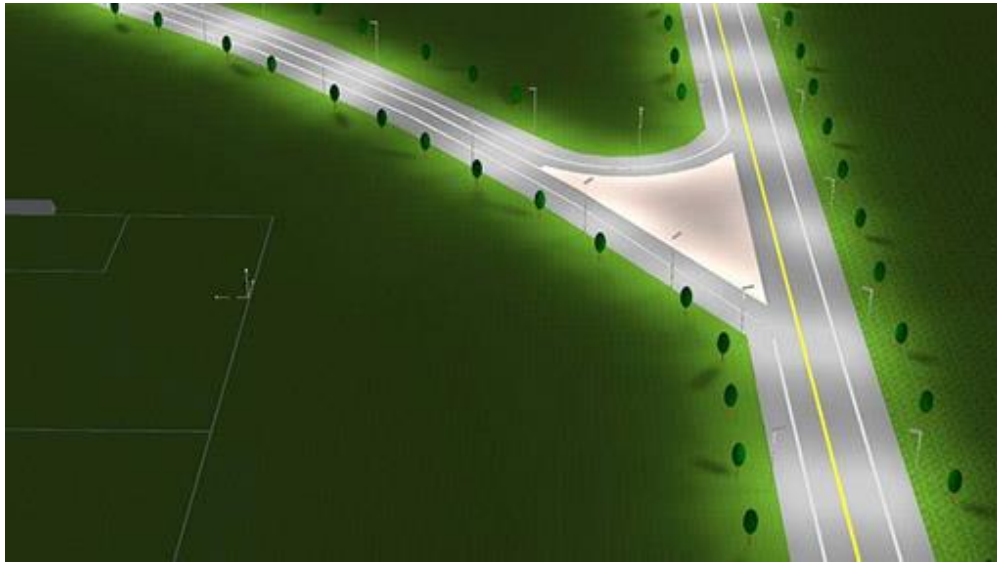
## D. EA2SL SPLIT SERIES INSTALLATION AND FUNCTION PRINCIPLE



- **Simple One Step Plug-in connection** between Panel and Light. All the wiring between battery, controller and light is pre-wired inside the Lamp Head.
- **Dimable and Adaptive Lighting System** to achieve all night lighting







### Study and Design

Our professional engineering team can provide the Study and Design for any Street Lighting Project and Lighting Solutions upon request.

**EA2SL SPLIT Series Solar  
Street Lights in Action!**





# Enviro Energy Solutions Ltd

## Your Gateway to the Sun

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



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



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