



solar made easy



**AIO - 180W**

**INTEGRATED  
SOLAR STREET LIGHT**



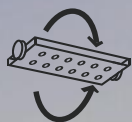
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**AIO** is the perfect solar lighting for the outdoors, it caters requirements of all applications, AIO has wide power ranges from 50W to 180W which apply pole heights from 5 meters to 14 meters. The strong point of AIO feature is its adjustable led modules, the angle of the led modules is easy to be adjusted manually in order to make the lights fall on the road properly and let the solar panel face the sun as much as possible.

The highest power of solar panels is 196W and the battery capacity is up to 25.6V 60AH, The solar panel and battery box are attached to each other by 6 screws which makes future maintenance accessible easily for repair or replacement.

The new generation of AIO series solar lights are also compatible with smart wireless intelligent control system which allows remote access for monitoring and re-programming. It is the perfect choice to help you expand your solar lighting business.



#### Adjustable LED Module

The angle of LED module is adjustable according to road width with better lighting performance, increasing the lighting utilization and less lighting waste.



#### LiFePo4 Battery

Grade A+ Battery cell with high uniformity of internal resistance and charging and discharging.



#### Programmable by Remote

The lighting program can be modified anytime by remote control according to customers' requirement.



#### High Brightness LED

High brightness led enhances visibility and safety while providing energy-efficient



#### MPPT Charge Controller

maximizes energy efficiency ensuring longer battery life and consistent illumination without blackout.



#### Robust Design

Robust design of light fixture provides superior durability, corrosion resistance, and heat dissipation.



## High-Efficiency Solar Panel with Exceptional Craftsmanship

The solar panel integrates cutting-edge technology with meticulous craftsmanship, delivering high conversion efficiency. Its innovative design ensures maximum energy generation, even under less-than-ideal sunlight conditions, making it a top-tier solution for sustainable lighting needs.



## Adjustable LED Module

The angle of LED module is adjustable according to road width with better lighting performance, increasing the lighting utilization and less lighting waste.



## Die-Cast Aluminum Housing

The lamp body is constructed from premium die-cast aluminum, blending sleek aesthetics with uncompromising strength. This design not only enhances heat dissipation but also ensures long-term durability, maintaining the product's integrity even in extreme weather conditions.



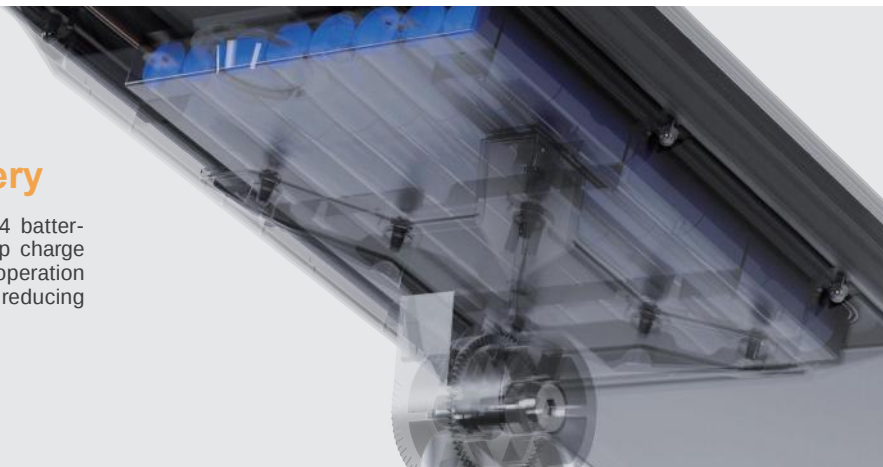
## Adjustable Mounting Bracket

Equipped with a durable and adjustable mounting bracket, it adapts seamlessly to horizontal and vertical pole mounts. This design allows for optimal light collection and custom lighting angles, improving performance and simplifying installation without the need for additional hardware.



## Long-life Lithium Battery

Equipped with high-performance LiFePo4 batteries, it can perform more than 4,000 deep charge and discharge cycles, ensuring reliable operation for up to ten years and significantly reducing maintenance and replacement costs.



## Motion Sensor

Solar street lights can be equipped with PIR sensors or microwave sensors. They provide accurate and reliable presence sensing and adaptive brightness control. This intelligent design can maximize energy savings, improve safety, and ensure sensitive lighting based on real-time conditions.



## Anti-Corrosion Powder Coating ( Optional)

Features a premium anti-corrosion powder coating for superior protection against rust, UV rays and environmental wear.



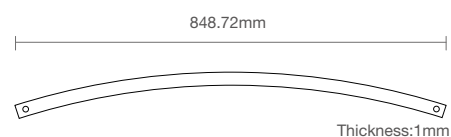
## MPPT Charge Controller

maximizes energy efficiency ensuring longer battery life and consistent illumination without blackout.

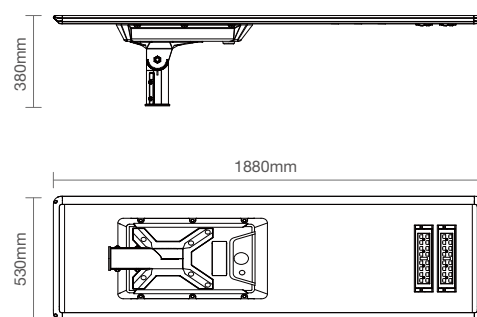
# MAIN PARAMETERS



Support rod Dimension



Dimension



## AIO I 180W

### Light Head

|                          |                           |
|--------------------------|---------------------------|
| Luminous flux            | 5,700lm                   |
| <b>LED working power</b> | <b>38W(2 LED Modules)</b> |
| CRI                      | >70                       |
| CCT range (dual color)   | 2200K~6000K               |
| LED lifetime             | >100,000 hours            |
| Light dimension          | 1880*530*380mm            |
| Pole Diameter            | 76mm                      |
| Warranty                 | 5 Years                   |

### Solar Panel

|                        |                               |
|------------------------|-------------------------------|
| Peak Power             | <b>196W</b>                   |
| Max. voltage           | 36V                           |
| Solar cells efficiency | 22.3%                         |
| Technology             | Monocrystalline silicon panel |
| Operating Temperature  | -40 °C ~ 85 °C                |
| Lifetime               | >20 years                     |

### MPPT Controller

|                          |                          |
|--------------------------|--------------------------|
| System voltage           | 24V                      |
| Max load power           | 200W                     |
| Motion Sensor            | PIR / Microwave Optional |
| Programmable             | √                        |
| MPPT tracking efficiency | 98%                      |
| Operating temperature    | -35 °C ~ 65 °C           |
| IP rate                  | IP68                     |

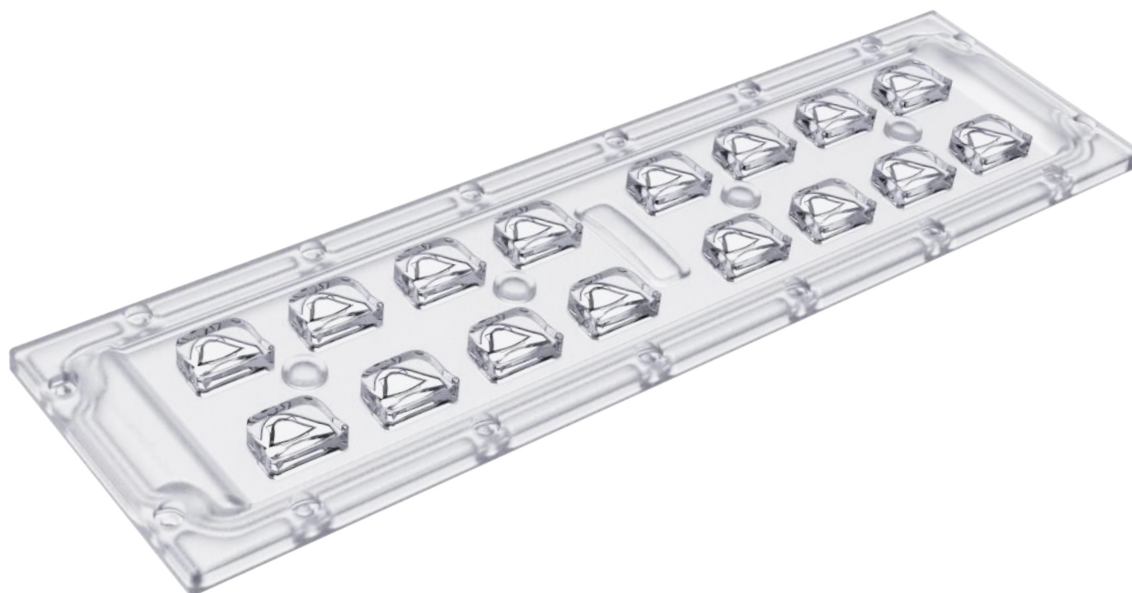
### LiFePO4 Battery

|                       |                           |
|-----------------------|---------------------------|
| Battery type          | LiFePO4 6000mA 3.2V 32700 |
| Battery capacity      | <b>25.6V 84AH 2150 WH</b> |
| Battery lifetime      | 4000 cycles @ D.O.D 50%   |
| Charge mode           | C.C + C.V                 |
| Storage Temperature   | +5 °C ~ +35 °C            |
| Operating Temperature | -10 °C~65°C               |

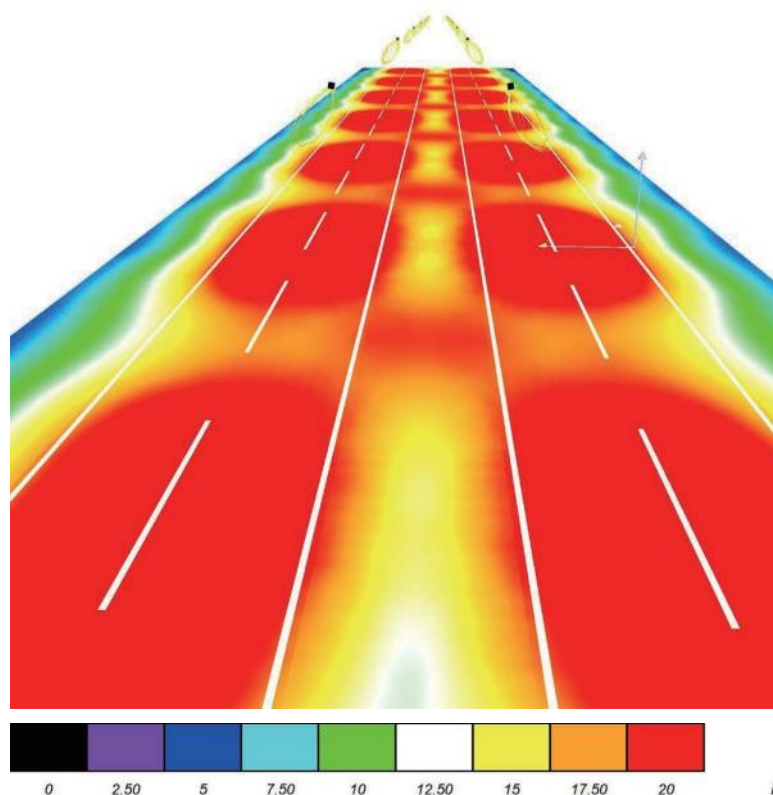
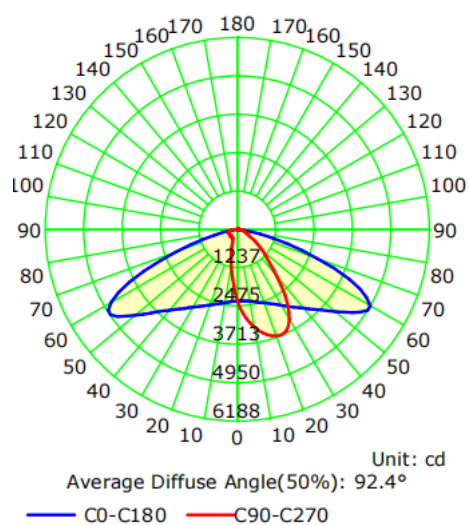
## Ultra Slim LED Optic

Optics is a very important component of the whole solar street luminaire while it is always neglected. LEDil optic is adopted for all models of ESL's solar street light. The suitable optic will be determined according to the project conditions which are related to the road width, the steel pole height, and distance between poles, etc

AIO is equipped with specially designed LED optics which is to illuminate the main road without wasting light out of road. It use a very narrow but very long lighting distribution pattern which ensures there is no black dot between the poles. With high brightness output and super narrow lighting distribution, it deliver a very smooth and uniform performance on the road, meanwhile with the help of longer lighting distance, there will be less quantity of poles which reduce the project cost a lot.



Light Distribution Curve



## Installation Method



## Working Mode

In addition to automatic switching on and off, you have the possibility of setting different lighting program easily by the simple remote control according to the needs of the project. Also you can set the light to work for 6 hours or 12 hours.

### Mode A

1H 100%  
full power

4H/30%(sensor 100%)

9H/20%(sensor 50%)

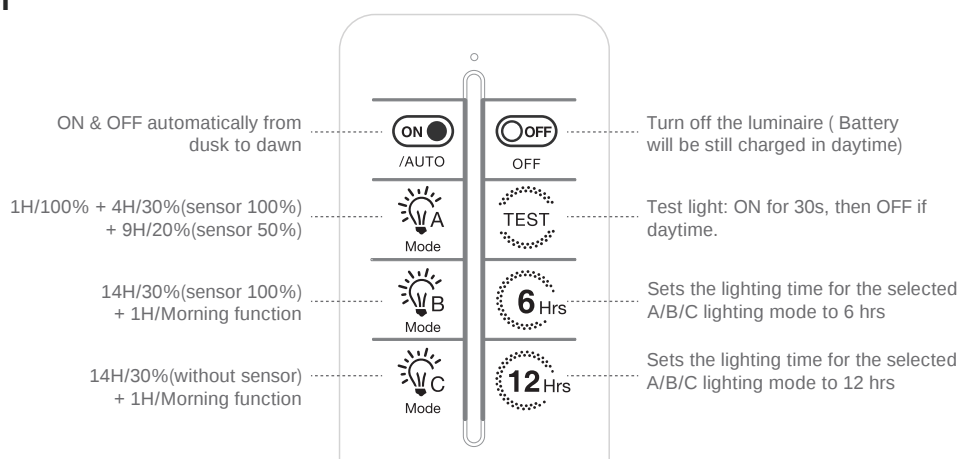
### Mode B

14H/30%(sensor 100%) + 1H/Morning function

### Mode C

14H/30%(without sensor) + 1H/Morning function

## Remote Control



### Note :

1. Turn on switch button in the solar light before use.
2. Default lighting mode: A.
3. Modes A/B/C programs could be changed prior to notice, pls be subject to the sticker at backside of remote.
4. Press OFF to turn off light (Charging will be still functional), Press ON restores last setted mode.
5. 6Hrs/12Hrs : Set duration for current mode (A/B/C). Press mode button (A/B/C) again to reset to default time.

## IoT Smart Control Solutions (Optional)

Our solar street lights can be seamlessly integrated with advanced IoT communication modules, allowing each street light to automatically report key data such as operating status, battery health and solar power generation, while supporting remote switching, adaptive dimming and instant fault diagnosis.



Single light control



Wireless Network



Malfunction management



Energy consumption analysis



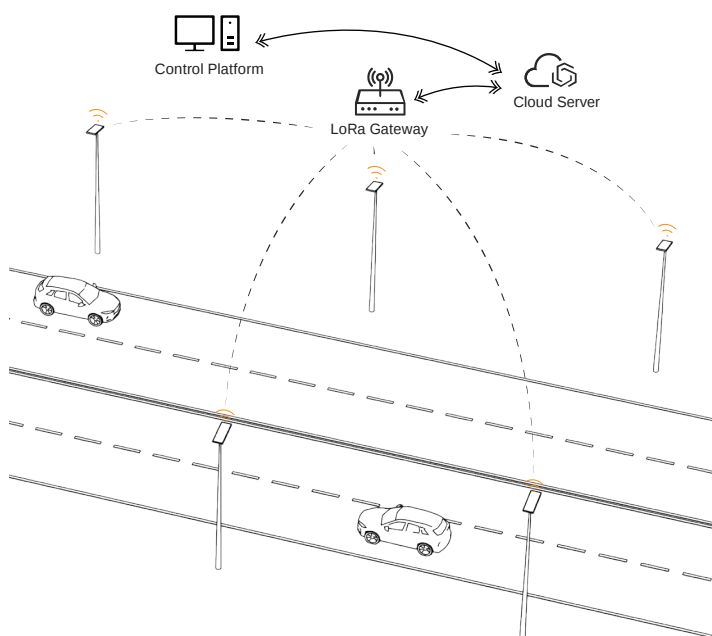
Intelligent monitoring



### SMART CONTROL SOLUTION

#### Advantages

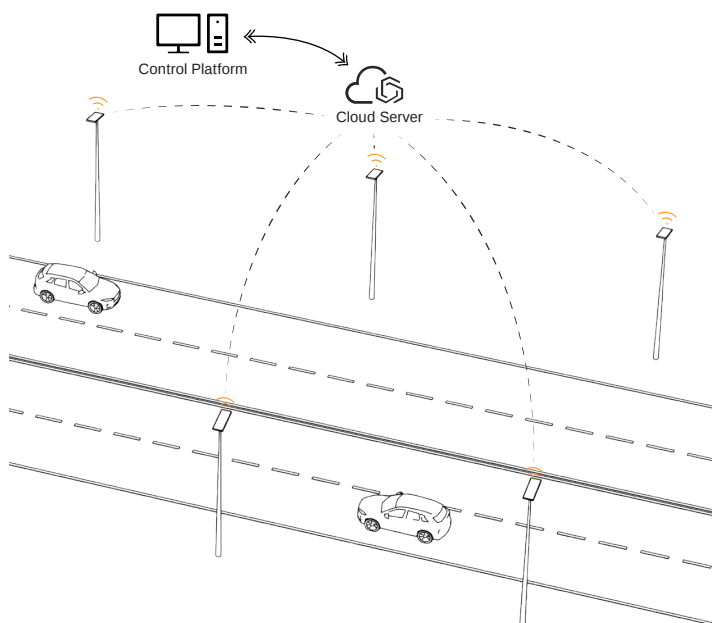
Ultra-low power consumption, ultra-long distance



### SMART CONTROL SOLUTION

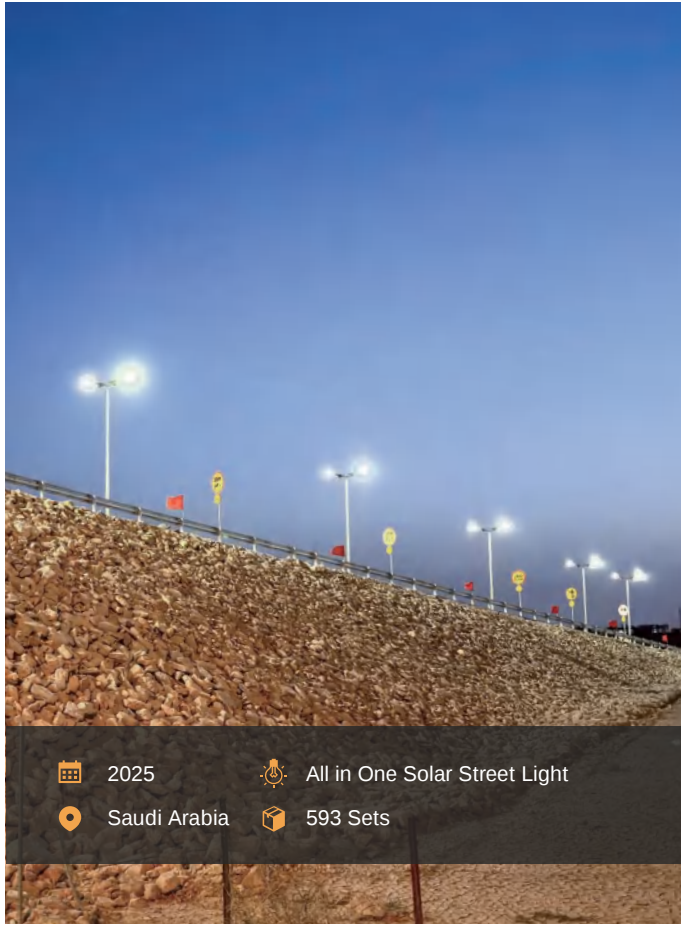
#### Advantages

Fast speed, no gateway required, Ultra long distance, High connection stability





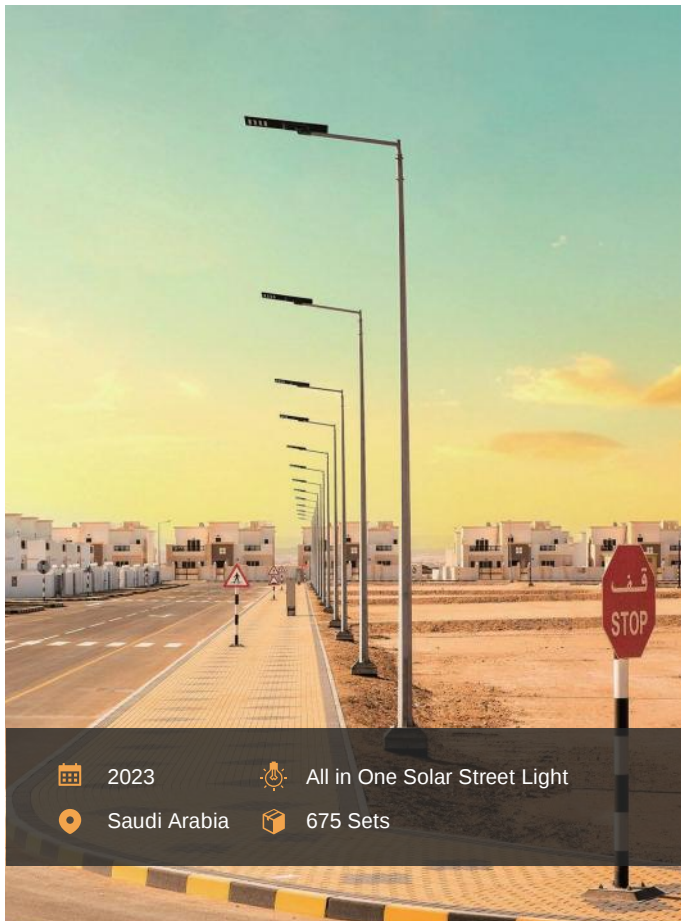
2023 All in One Solar Street Light  
Erbil, Iraq 1164 Sets



2025 All in One Solar Street Light  
Saudi Arabia 593 Sets



2023 All in One Solar Street Light  
Oman 132 Sets



2023 All in One Solar Street Light  
Saudi Arabia 675 Sets



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