

# HIGHLIGHT SP-ESDL Specifications



## Why us?

### **Innovative Technology**

High-efficiency solar and advanced LEDs deliver superior performance, long life, and maximum ROI.

### **Photometric**

We conduct photometric measurements on all our products to ensure optimal performance and compliance with industry standards

### **Versatile Lighting**

We designs and install solar-powered lighting systems tailored for all kind of locations such as streets, parks, pathways, homes, etc.

### **Global Reach**

Worldwide success proves our adaptability and regulatory expertise.

### **Sustainable Savings**

These solutions enhance safety, promote sustainability and providing significant energy and cost saving.

### **Warranty**

SolarPath is dedicated to delivering architectural and commercial-grade solar lighting that can be customized to meet specific client requests, both in technical specifications and aesthetic design, ensuring a perfect fit for a diverse range of needs.



The design of solar street light / courtyard light absorbs energy from the universe, and combines it with high efficiency solar panel, LEDs, and Lithium battery. It adopts advantage technics such as micro-controller, human infrared sensor and so on and combines with integrated design to achieve multiple features such as low power consumption but high brightness, long lifespan and maintenance free, meanwhile with waterproof function and great thermal dissipation. The intelligent control can be reprogrammed from the ground with an infrared before and after install. It is one of our great innovation patented products.

## Technical specification

|                                |                                                                                                                      |                                         |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Solar Module Parameters</b> | Type                                                                                                                 | High-efficiency Monocrystalline Silicon |
|                                | Power                                                                                                                | 25W                                     |
| <b>Solar Charge Controller</b> | MPPT (Maximum Power Point Tracking), infrared solar charging controller                                              |                                         |
| <b>Battery</b>                 | LifePO4                                                                                                              | 12AH                                    |
|                                | Battery enclosure                                                                                                    | Integrated in lighting fixture          |
| <b>LED Light Parameters</b>    | Light Source Power                                                                                                   | 20W (Up to 3,500 lm)                    |
|                                | CCT (Correlated color temperature)                                                                                   | 3,000K-4,000K                           |
|                                | CRI (Color rendering index)                                                                                          | >70                                     |
| <b>Working Mode</b>            | Always dim on 30% output, when motion sensor trigger the light jump up to 100% output.<br>*Depend on solar radiation |                                         |
| <b>IP Rating</b>               | IP66                                                                                                                 |                                         |
| <b>Material</b>                | Aluminum Die-casting                                                                                                 |                                         |

## Key features:



Premium-grade Integrated All-in-one Design, Easy to Install and Maintain.



Environment Friendly & Electric Bill Free - 100% Powered by the Sun.



No Trenching or Cabling Work Needed.



Light On/off and Dimming Programmable Smart Lighting.



High Luminous Efficiency of 175lm/W to Maximize Battery Performance.



IP66 Luminaire Ensures Long Lasting and Consistent High Performance.

## RELIABILITY UNEXPECTED VALUE



Only top-quality mono - crystalline silicon solar panels with high efficiency and long lifetime are used.



Quality lithium batteries are used to store the energy, provide energy for immediate requirements, and enable a back-up for days when there is little or no sun.



High Lumen LED for maximum efficacy. Dedicated designed low-voltage solar controller technology with dimming capabilities for power-save management.  
Lifetime > 50,000 hrs and CRI nominal 70.



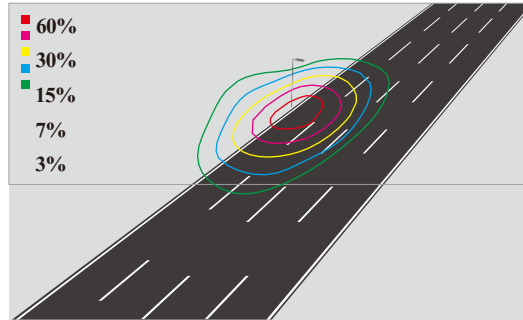
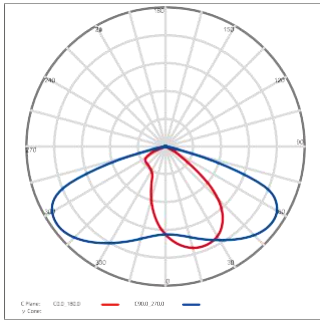
Microprocessor managed algorithms autonomously determine sunrise and sunset.



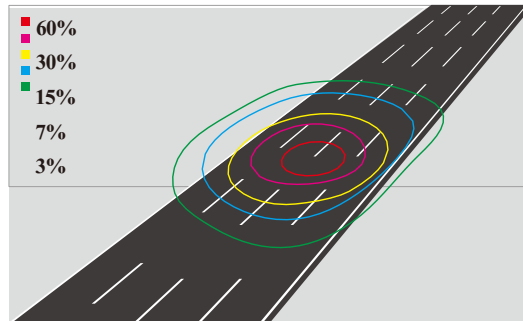
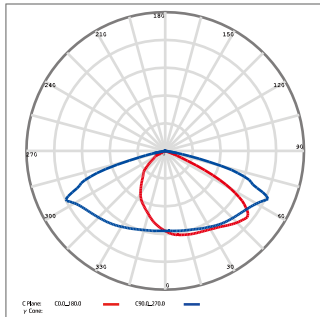
Easy to install without buying cables and rectifiers, directly on pole.

## Photometric

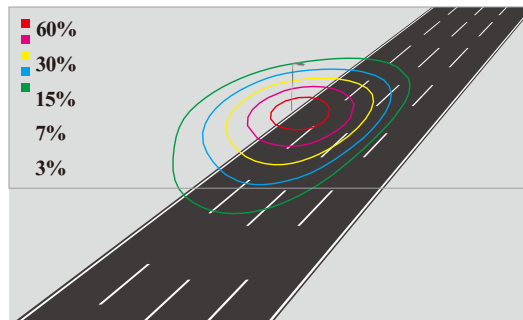
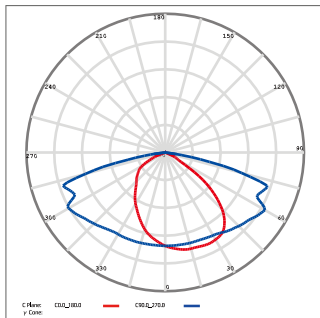
65×150° (TYPE II-S)



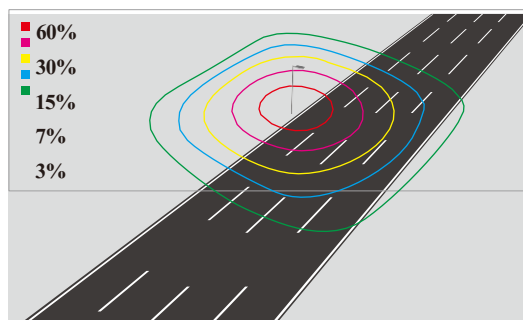
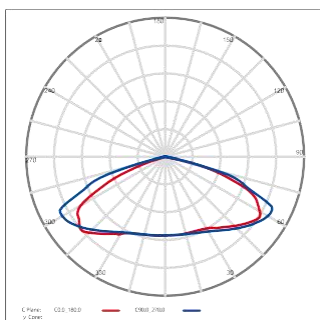
90×150° (TYPE III-S)



90×155° (TYPE II-S)



150° (TYPE V)



Default setting: 6m high Installation, 100% brightness.

## Installation notes

1. Due to variations in longitude and latitude at the installation site, the angle at which the sun's rays illuminate differs. During installation, it is crucial for the solar panel to be oriented towards the sun precisely at 12:00 noon. However, often due to factors like road direction and light poles, achieving this alignment becomes challenging. The solar panel must still maintain a horizontal position even if it can't be ideally oriented towards the sun at noon due to road lighting requirements.

Several conditions can lead to suboptimal functioning of standard lamps. Prior to making a purchase, it's important to communicate these factors to the salesperson and consider increasing the solar panel's power capacity:

- a. Any deviation below the horizontal plane of the solar panel, relative to the solar irradiation angle, will result in a significant decline in the solar panel's power generation efficiency.
- b. When installing solar lamps and lanterns, it's essential to avoid any obstacles that might block sunlight, such as trees or buildings.
- c. Natural elements like rain, ice, snow, dust, clouds, and bird droppings can reduce the solar panel's power generation efficiency.

Ensuring that the solar panel remains unobstructed by barriers like trees and buildings, and accounting for factors such as the solar panel's angle and external elements, are vital for optimal performance.

2. Install lamps at a considerable distance from areas prone to strong electromagnetic interference, such as high-voltage cables and high-power wireless transmission towers. These sources could potentially disrupt the lamp control system, leading to malfunctions and improper operation.

3. When the temperature drops below 32°F, the efficiency of lithium iron phosphate batteries for charge and discharge decreases. To prevent damage and the battery protection triggered by over-discharge, it's advisable to explain this to the sales

staff and consider increasing battery capacity before making a purchase.

4. Any environmental impact can result in a decline in the efficiency of solar panel power generation. Repeated discharge of the lithium iron phosphate battery might easily activate the protection mechanism, causing the lamps to stop functioning normally. Most lithium batteries can be restored to operation by disconnecting and reconnecting the battery-light source connection and the solar panel connection.

5. Once the battery protection has been deactivated and reactivated, our focus should be on identifying and resolving any natural environmental factors that compromise the efficiency of solar panel power generation, as well as minimizing the power consumption of the light source.

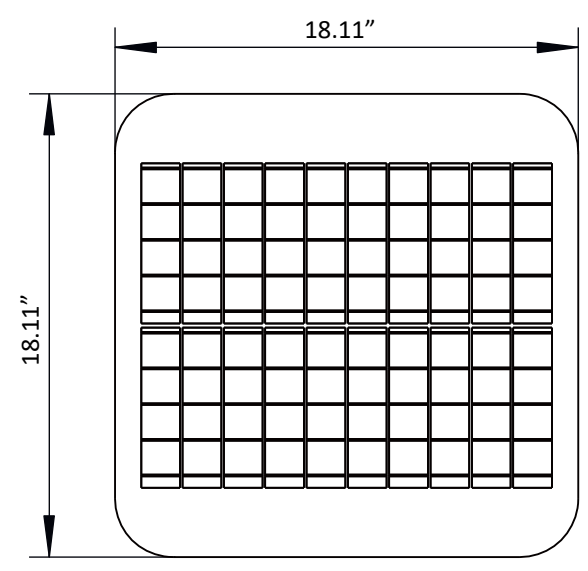
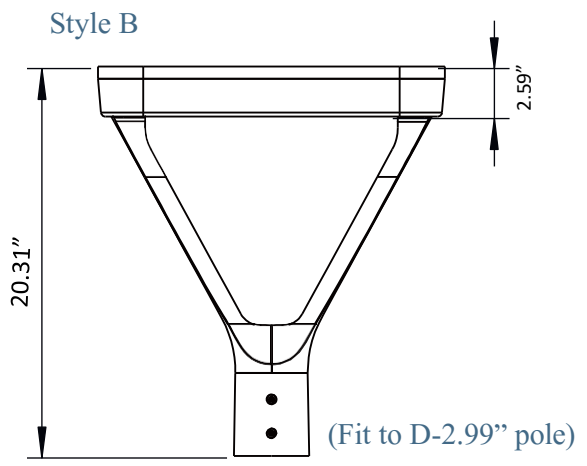
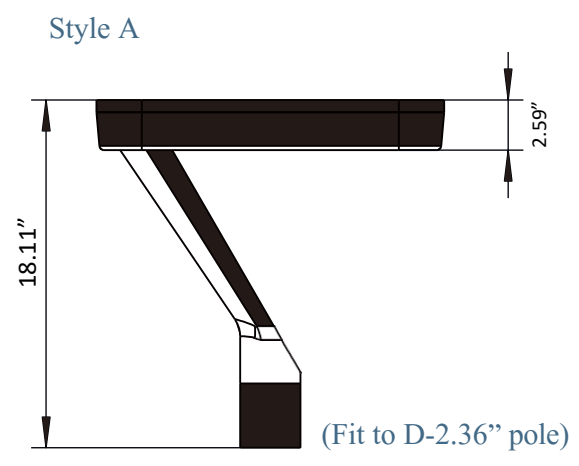
6. Install the lamps on days abundant with sunshine. The lamps are initially set to 30% power upon leaving the factory. Prior to installation and usage, ensure that the lamps can receive effective sunlight charging for at least 4 hours after activation. Failure to do so may trigger battery startup stress protection due to excessive discharge, leading to abnormal lamp operation.

7. The self-discharge and stress protection features of the lithium iron phosphate battery necessitate that if the lamp remains unused and uninstalled for a period of 60 to 90 days from the factory departure, it must undergo a 4-hour effective sun charging upon activation.

Instances where lamp functionality is compromised due to the aforementioned circumstances are not included in the warranty coverage. However, we are committed to assisting customers in identifying and analyzing the underlying causes, and devising plans for enhancements. It's important to note that lamps unable to activate after battery protection will not be covered by the warranty.



## Dimensions





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## USES AND APPLICATIONS GUIDE

|                   |  |
|-------------------|--|
| Streets Lighting  |  |
| Parking Lots      |  |
| Residential Roads |  |
| Public Parks      |  |
| Walk/Bike paths   |  |

## ORDERING GUIDE

Ordering Guide: HIGHLIGHT SP-ESDL-25W-20W-2-25K-12AH-BLK-SP-01-01-A

| Model             | Solar Panel | LED Power | Distribution type                       | LED Color Temp | Battery Options | Body Color             | Mounting options | Options          | Charger                             | Bracket Design                                                                                                                                                                     |
|-------------------|-------------|-----------|-----------------------------------------|----------------|-----------------|------------------------|------------------|------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HIGHLIGHT SP-ESDL | 25W         | 20W       | 2- Type II<br>3- Type III<br>5 – Type V | 30K<br>40K     | 12AH            | BLK- Black<br>GR- Grey | SP- Slip Fitter  | 01-Motion sensor | 01- Non available<br>02- DC Charger | A – <br>B –  |



\*Up on request

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