



# STREET LIGHT





## About Us

Street lighting serves as an essential element of urban infrastructure, facilitating safe navigation and visibility during nighttime while enhancing security against criminal activities and vandalism. As urban areas increasingly prioritize energy efficiency, the inquiry arises: which lighting option is optimal for street illumination? ELM is committed to offering an energy-efficient alternative by replacing traditional high-pressure sodium (HPS) lamps with our state-of-the-art LED street lighting.

HPS lamps emit a warm yellow-orange light that providing adequate overall illumination, but suffers from poor color rendering and low energy efficiency. In contrast, LED street lights are favored for their minimal power consumption and extended lifespan.

Additionally, innovative technologies such as smart LED systems and adaptive luminaires, which utilize sensors to automatically adjust brightness based on environmental changes, are emerging. These advancements promise enhanced efficiency and safety, while also offering supplementary functions like CCTV, billboards, and micro weather sensors to transform cities into smart environments.

It is crucial to carefully consider all these aspects when determining the most suitable lighting solution for urban applications, and ELM Energy Sdn. Bhd is prepared to assist cities in making well-informed choices.





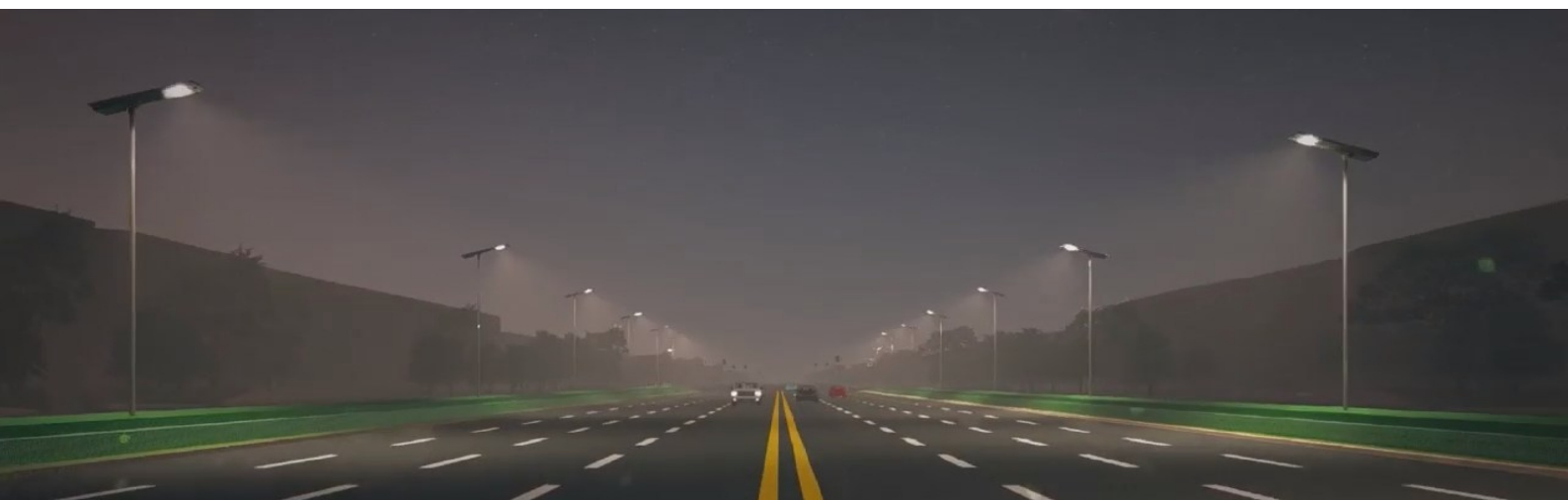
# SOLAR STREET LIGHT

## Application

The ELM solar light is a solar-powered LED lighting solution that can be used at any location where there is no mains power supply. Thanks to its timeless smart design, the ELM solar light is excellent for lighting modern urban space as well as protected monumental structures. The ingenious operating system guarantees flawless function for several nights even during the worst weather. Ideal for side streets with minimal traffic, squares, parking places etc.

## Benefits

- **Lower Operation Cost:** It is less expensive to operate a solar powered street light than a traditional street light.
- **Compact Design:** Our design and technology implementation have been driven by our desire to eliminate the need for bulky external battery boxes and external solar panels and achieve All-in-One Solar Powered Street Light.
- **Reduced Damage/Theft:** By locating directly on the light fixture and placing the battery within, the risk of damage, theft or tampering is greatly reduced. There are no wires in the street pole, which means that the wire itself (which exists in regular street lights) can't be stolen and sold for scrap.
- **Ruggedized Technology:** Require less maintenance and reduced parts replacement due to initially incorporating higher quality components.
- **Improved Safety:** The solar powered street light does not require connection to an electrical grid. It is safer and easier to install. In the event of a power outage, the light remains on. This reduces the chance of accidents and the constant light deters theft/vandalism.
- **Anywhere/anytime:** The solar powered street light can be used in any location. Since no electrical grid is required, it can be installed on buildings, in parking lots, in remote locations simply by hanging it on a pole.
- **Faster Installation:** Since you don't need to trench power lines to the pole, run wires up the pole, connect wires to an electrical grid, or hard wire the street light, the installation is significantly faster. In fact, it is so easy, it can be installed on the pole before it's erected, and thereby reducing a step completely from the process. An added-value package combines a guarantee extended to 5 years with replacement battery and special anti-theft screw set.





Clamp  
Mounting Bracket

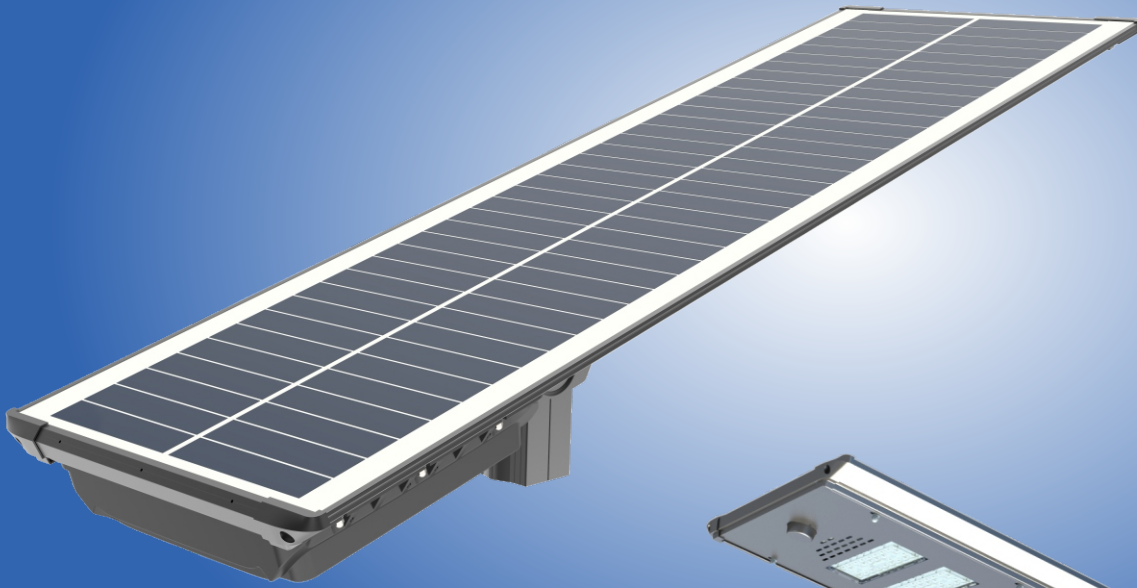
Vertical  
Mounting Bracket

Sleeve  
Mounting Bracket



**Solar Street Light** **SDS 8100**

LED Power	80W
Max Lumens	10,400 - 12,800LM   130 - 160 Lumens Per Watt
Solar panel	130W/36V
Battery	LiFePo4   717WH   28 Ah / 25.6V
Measurement Approx	1120*360*43mm
Material	Aluminum Alloy Cover, Die-cast Aluminum Structure
Colour Temperature	Default is 6,000K. For other setting please inform us pre-production, can choose between 3,000 - 6,000K
Work temp.	-20°C ~ +50°C
Protection	Unit as a whole is IP66 / Battery IP65 / Controller IP67
CRI	>80
Charge time	3~6hrs (depending on Lighting Mode)
Lighting Mode	<p>Auto On/Off from night to morning.</p> <p>Option 1 ( Default Setting): First 2hrs 100% Brightness; Next 8hrs 30%; Remaining time until morning 50%</p> <p>Option 2 (Upon request pre-production): Standby on 25% Brightness, when motion detected then 100% for 10 seconds. Recommended for pedestrian only.</p>



High Brightness  
LED



Built-in LeFePO4  
Battery



IP 65 Water  
Resistant



Durable  
Solar Panel



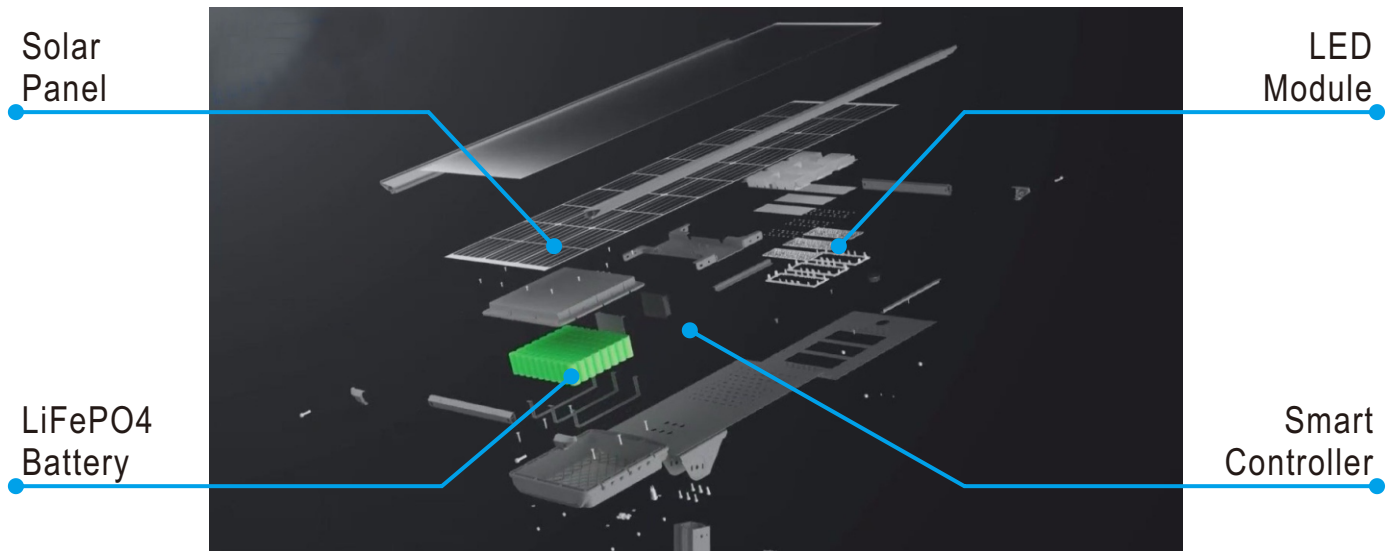
5 Years  
Warranty



Motion Sensor  
[Optional]



Full Charging on Daytime, and Light Up Automatically in Night Time



Tiltable Design to capturing Maximum Solar Radiation

# System Module

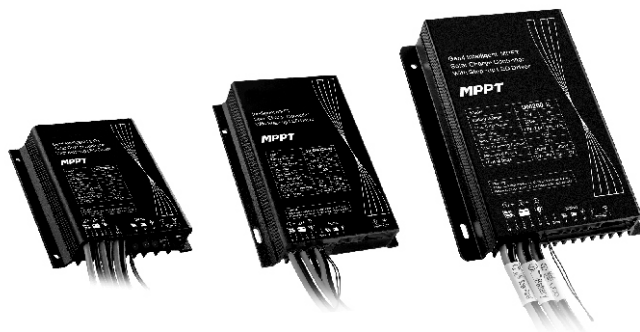
## Control Module

DM60/80/200

### Module description

Waterproof All-in-One Constant Current MPPT Charger Controller

- Model : DM60/DM80/DM200
- System Voltage : 12V
- Sleep Power Consumption : <1mA
- Max. Load Power : 60W/80W/100W
- Intelligent Power : High/Moderate/Low/Auto/USE
- Max. Solar Input Power : 130W/200W/260W
- Max. Charge Current : 10A/15A/20A
- Charging Conversion Efficiency : 85%~98%
- Protections : Reverse Polarity Protection/Over-Voltage Protection  
Battery Overcharge and Over-discharge Protection/  
Over-temp. Protection/Open Circuit and Short Circuit Protection



## Solar Panel

HTS 150W

### Module description

Monocrystalline Solar Module

- Model : HTS 150W
- Max. Power (Pmax) : 150Wp
- Max. Power Voltage (Vmp) : 18V
- Max. Power Current (Imp) : 8.33A
- Open Circuit Voltage (Voc) : 22.5V
- Short Circuit Voltage (Isc) : 9.00A
- Module Efficiency : 18.66%
- Front Glass : 3.2mm Tempered Glass
- Dimension (mm) : 529 x 1510 x 30mm



## Battery Pack

BP60/BP80

### Module description

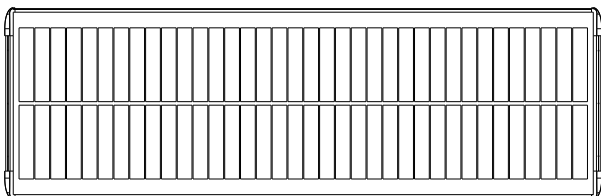
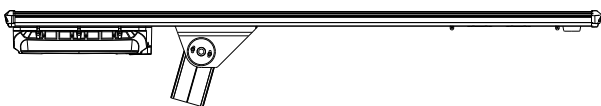
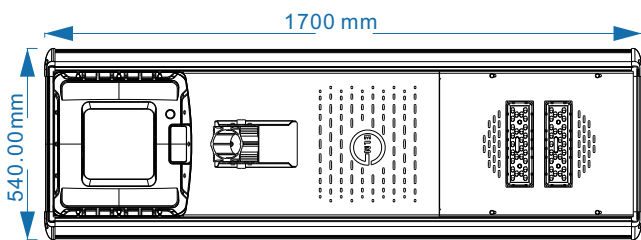
Future Proof Battery Cell Module

- Battery Cell Type : LiFePO4 Battery Cell
- Capacity : 60Ah/80Ah/80Ah
- Working Voltage : 12V

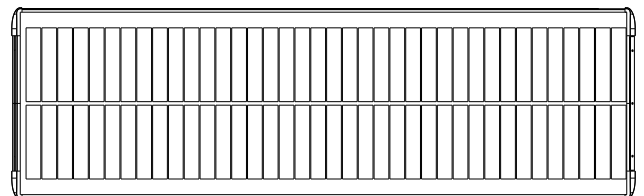
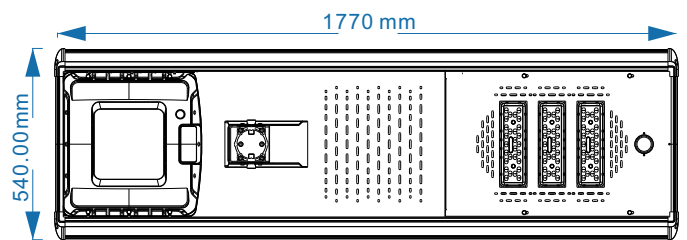


# Technical Specification

Model	ESL-60	ESL-80	ESL-100
Capacity	60W	80W	100W
Light Module	50W*2	50W*3	50W*3
LED	Philips 3030	Philips 3030	Philips 3030
LED Life	>50,000 Hours	>50,000 Hours	>50,000 Hours
Connector	M15 Waterproof Connector	M15 Waterproof Connector	M15 Waterproof Connector
Battery	LiFePO4,60Ah/12V	LiFePO4,80Ah/25.6V	LiFePO4,80Ah/25.6V
Solar Panel	Monocrystalline 150W/18V	Monocrystalline 180W/18V	Monocrystalline 180W/18V
Dimension	1700mm*540mm*180mm	1770mm*540mm*180mm	1770mm*540mm*180mm
Casing	Die casting aluminum alloy	Die casting aluminum alloy	Die casting aluminum alloy
Controller	12V/24V, 10A	36V, 15A	36V, 15A
Light Color	3000K-6000K	3000K-6000K	3000K-6000K
Light Distribution	Bat Wing	Bat Wing	Bat Wing
IP Level	IP65	IP65	IP65
Work Time	10~12 Hours (Full Charge)	10~12 Hours (Full Charge)	10~12 Hours (Full Charge)
Working Mode	8~10 Hours/Night, 2 Rainy Days	10~12 Hours/Night, 2 Rainy Days	10~12 Hours/Night, 2 Rainy Days
Operation Temp. (Charging)	0~60C	0~60C	0~60C
Operation Temp. (Discharge)	-20~60C	-20~60C	-20~60C
Mounting Height	5~8 Meter (Recommended)	5~8 Meter (Recommended)	8~12 Meter (Recommended)
Warranty	5 Years	5 Years	5 Years



**ESL-60**



**ESL-80/ESL-100**



# LED STREET LIGHT

## Application

LED Street Lights have become increasingly popular over the past couple of years due to their energy efficiency and long life-span when compared with traditional streetlights. Apart from being able to generate up to twice the amount of lumens (light output) for each watt consumed than standard bulbs, LEDs also offer improved visibility thanks to their directional light beam which helps reduce light pollution levels significantly. In addition, LED lights don't contain any hazardous materials and are recyclable thereby making them an eco-friendly choice for many households and businesses looking for sustainable alternatives for powering their outdoor areas.

## Benefits

- **Lower Operation Cost:** It is less expensive to operate a LED street light than a traditional street light.
- **Ruggedized Technology:** Require less maintenance and reduced parts replacement due to initially incorporating higher quality components.
- **Long Life-span:** LED Light provides excellent options able to reach up 50,000 hours of operation before needing repair or replacement.
- **Energy Saving :** The LED street light generates up to twice amount of lumens (light output) for each watt consumed than standard HPS bulbs, so the electricity expenditure will drop 50% once the transition to LED Light.
- **Reduce CO2 emission :** By consuming less electricity to produce the same or even better lighting output, LED lights directly contribute to lowering the carbon footprint of urban areas.
- **Quality Ensure :** ELM offers a guarantee extended to 5 years.



# LED Street Light

## LED Street Light

ELA-70/100/125

### Product description

Widely used in urban roads, highways, sidewalks, squares, schools, parks, industrial areas and other venues

- Light source: Philips LED SMD
- Wattage: 70W/100W/125W
- CCT: 3000K / 6000K
- Efficiency : ~120lm / W
- Beam angle: 70\*140°
- Size: 790\*400\*130 mm
- Input Voltage: 90-305V
- IP rating: IP 65
- Material: Die-cast aluminum / Modular type
- CE Approved

### Optional function

- Add PLC/RF433/4G Module
- Light Sensor



## Smart Street Light

ELB-70/100/125

### Product description

Widely used in urban roads, highways, sidewalks, squares, schools, parks, industrial areas and other venues

- Light source: LED SMD
- Wattage: 70W/100W/125W
- CCT: 3000K / 5000K
- Efficiency : ~120lm / W
- Beam angle: 70\*140°
- Size: 870\*350\*120 mm
- Input Voltage: 90-305V
- IP rating: IP 65
- Material: Die-cast aluminum / Modular type
- CE Approved

### Optional function

- Add PLC/RF433/4G Module
- Light Sensor



## Technical Specification

Model	ELA-70/100/125	ELB-70/100/125
Capacity	70W/100W/125W	70W/100W/125W
Light Module	40W*2/50W*2/50W*3	40W*2/50W*2/50W*3
LED Chip	Philips 3030	Philips 3030
Light Source brand	EUM 75W	EUM 75W
LED Life	>50,000 Hours	>50,000 Hours
Voltage	100-277 VAC	100-277 VAC
Dimension	790*400*130	870*350*120
Casing	Die casting aluminum alloy	Die casting aluminum alloy
Light Color	3000K-6000K	3000K-6000K
IP Level	IP65	IP65
Operation Temp.	-20~60C	-20~60C
Mounting Height	5~12 Meter (Recommended)	5~12 Meter (Recommended)
Warranty	5 Years	5 Years



# POLE

## Application

With the rapid development of city modernized construction and the continual improvement of people' living, we bring forward higher demand for the quality of infrastructure solutions, light pole and base station pole are key component for building reliable infrastructure. ELM Pole Product can be used from the main street to expressway and Sports and Stadium as well as government area. We are engaged in customizing your product, all of our design, engineering, manufacture are strictly treated by our professional team which overcomes the obstacle to meet customer satisfaction. Every product would be through strict quality control process, make sure every pole is in good condition before shipment. It is why the government, municipalities, developers, architects, and urban renewal professionals willing to trust us.

Our products include:

- Street Light Pole
- Garden Light Pole
- Landscaping Light Pole
- Traffic Light Pole
- Manual External Halyard Flagpole
- Manual Internal Halyard Flagpole
- Electrical Operated And Medal Award Flagpole
- Customized flagpole
- Customized light pole
- Customized Base Station pole
- Flagpole & light pole accessories

## Advantages

- **Long Life-span:** Crafted from good-quality steel and hot-dip galvanized, the poles are designed to endure even demanding conditions, making them a reliable choice for infrastructure, construction and utility projects.
- **Quality Ensure :** ELM offers a guarantee extended to 10 years.



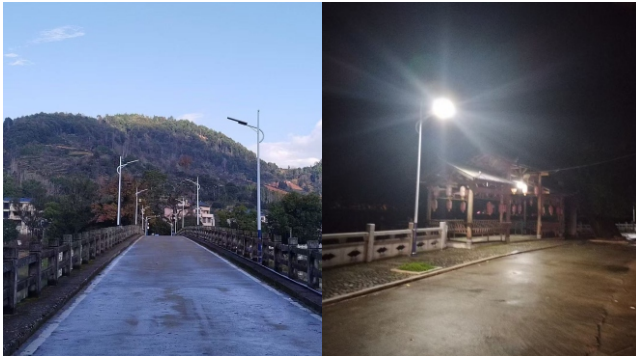


POLE





# PROJECT REFERENCE



60W Solar Street Light  
Zhouning County, Ningde City, Fujian Province, China



60W Solar Street Light  
Tongcheng County, Xianning City, Hubei Province, China



30W Solar Street Light  
Zigui County, Yichang City, Hunan Province, China



60W Solar Street Light  
Yuelu District, Changsha City, Hunan Province, China



30W Solar Street Light  
Nanchang County, Nanchang City, Jiangxi Province, China



30W Solar Street Light  
Fu County, Yan'an City, Shaanxi Province, China



**ELM ENERGY SDN. BHD.** REGISTRATION NO. : 202401053197 (1599039-H)

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