

All in Two

SOLAR STREET LIGHTS

30~120Watt



INTEGRATED SOLAR STREET LIGHTS 30~120Watt

- * **INTEGRATED DESIGN**
- * **BIG BATTERY CAPACITY**
- * **CONTINUES HIGH POWER**
- * **LONG LIFETIME**

All in Two solar street light series are dedicated to provide the real and continuous high brightness output for high-end project. Difference from all in one solar street light, solar panel of all in two is seperated from solar light head and two parts are are connected to each other directly by universal MC4 connectors directly. Big LifePO4 battery pack with 2-3 days automony and MPPT charge controller are built inside of light fixture. Three models are available as HELIOS for 20W 30W and 50W, HERMES is for 60W and 80W, THOR is for 100W and 120W. All the specification can be customzied according to client's requests.



Profile + Feature

As the pioneer of all in two solar street lights on the market. Auroras has got a high reputation from clients over last years on quality and service. These 3 models are the popular models for commercial lighting because of its lighting performance and quality.

All in two solar led street light is an innovative structure of solar led street light developed since 2016. It adopts the concept of all in one solar led street lights in order to reduce the complication of installation but also maintain the stability and flexibility of regular solar-led street lights whose components are individual.

Additionally, an advanced wireless intelligent control system is available which makes the solar street lights could be monitored and settable online freely. The state of the solar light system could be recorded in the system and all states including the voltage of the battery, solar panel, and led light power is visible at the online control platform. Customers can modify the lighting power and its lighting programs easily as required. An automatic problem alarm is also available which reduces of step and cost of maintenance work a lot.



LED Source

It adopts ultra high brightness of Philips lumileds SMD5050 as light source. Each led chip can be driven to 5W max. With 64pcs of 5050 leds driven by low current, it achieve to more than 150lm per watt. Meanwell it output less heat which will extend the lifetime of LED chip greatly.

Lithium Battery Pack

Supber long lifetime LifePO4 battery are adopted for all model of solar street light. Produced with high requirements of management and production by ISO9001 certified factory, lifePO4 battery is able to provide continues and stable power to system for many years without maintainence.

Charge Controller

As the CPU of solar led light, high efficiency MPPT solar charge controller are adopted for all lights, it allows 12V/24V 10A , 15A ,20A depending on the power of light. With high quality and high efficiency solar charge controller, it can guarantee sufficient power can be generated with limited solar radiation condition. Lighting program can be modified with remote control easily as customers' demand.

MC4 Connection

Solar light head is to be connected to solar panel directly with MC4 connectors. it make the installation simple and durable. Separated solar panel can be freely adjusted as needed. Customer can select a suitable power of solar panel depending on their local solar radiation at will.

Design Aesthetics

It adopted streamlined design concept with better wind resistant performance and appearance. Designed specially for premium quality projects requests.

Green Energy

100% pure energy from sun. No bill for electricity anymore. No pollution. Endless power from nature.

High Luminous Output

Adopted 64pcs of led chips philips SMD5050 as light source ,driven by less rated input current, It reaches high lumens luminous output up to 160lm/watt.

Programmable

Smart MPPT solar controller built-in, Even after the products are installed, the lighting scheme can be reconfigured or adjusted



Helios



Hermes



Thor

Long Lifetime

Using superb quality battery with long lifetime. deep cycles. Working well in low and high temperatures at -20 C ~+65 C . Maintenance free for years without extra cost.

Quality lithium battery with long lifetime and mppt solar controller are built inside of light, Only need to be connected to solar panel via MC4 connectors and turn on

Compact Sturcture

The pioneer model on market based on "PLUG and PLAY" idea. Patents in utility & appearance registered

Patented Design

Long Autonomy

Up to 12 hours solar light head can work with 100% power continuously. Using energy saving modes, Autonomy can reach to 3~4 days max without charging.

Specification

Item number	HELIOS-T3	HELIOS-T5	HERMES-T6	HERMES-T8	THOR-T10	THOR-T12
Luminous Flux	4,800lm	6,800lm	8,800lm	12,800lm	14,800lm	16,800lm
Rated Power	30W	50W	60W	80W	100W	120W
CRI	>79					
LED Type	Lumileds SMD3030 72pcs		Lumileds SMD5050 64pcs		Lumileds SMD5050 64pcs	
CCT Range	3000K / 4000K / 5000K / 6000K					
Beam Angle	Type I / II / III / III optics optional from LEDil					
Battery Capacity	307WH 12.8V	460WH 12.8V	538WH 12.8V	768WH 25.6V	921WH 25.6V	1075WH 25.6V
Battery Type	Brand new LifePO4 32700 6000mA 3.2V					
Battery Lifetime	D.O.D 50% 4000 cycles					
Charge Time	4 hours					
Discharge Time	>24 hours					
Advanced Control System	Hybrid type Solar + 220V backup / Zigbee 2G/4G Wireless Control					
Regular Solar Panel	80W 18V	100W 18V	120W 36V	160W 36V	200W 36V	260W 36V
Vertical Solar Module	140W 18V	280W 36V	340W 36V	400W 36V	540W 36V	600W 36V
Cable & Connector	2.5mm 0.6 meters with MC4 connectors					
Working Temp.	20 °C ~ 75 °C					
Control Method	Automatic dusk to dawn / Time Control / Manual ON-OFF					
Default Lighting modes	6 hours 100% + 6 hours 50%, 12 hours operation					
Fixture Size	678*276*102mm					
Fixture materials	Aluminium Die Casting					
Fixture color	Gray RAL7005					
N.W/Light	9.60kg	10.60kg	14.30kg	15.40kg	13.50kg	19.60kg
G.W/Light	10.30kg	11.20kg	15.30kg	16.40kg	20.40kg	21.80kg
IP Rate	IP67					
Warranty	3 years					
Certificates	CB CE ROHS IP67 LM79 LM80 FCC					

MPPT Charge Controller



Model number	MES60 (for T3 & T5)	DM60 (for T6)	DM120 (for T8 & T10)	DM160 (for T12)
System voltage	12V	12V	24V	24V
Output current range	50~3000mA	50~3000mA	50mA~4200mA	50mA~5600mA
Max. power of regular solar panel	150W/18V	150W/18V	260W/36W	400W/36W
Max. power of vertical solar module	400W/18V	400W/18V	600W/18V	800W/18V
MPPT tracking efficiency	98%			
Load output voltage	<60V	60W	120W	160W
Max load power	60W	14.6V	29.2V	29.2V
Overcharge voltage	14.6V	13.5V	27V	27V
Overcharge recovery voltage	13.5V	11.0V	22.0V	22.0V
Over-discharge voltage	11.0V	12.4V	24.8V	24.8V
Over-discharge recovery voltage	12.4V			
Light control voltage	7V			
Operating temperature	35°C ~ +65°C	260g	400g	510g
Net weight	380g	80*82*22.6mm	114*88.3*24.5mm	142*88.3*24.5mm
Dimension(mm)	80*82*22.6mm			
IP rate	IP68			
Warranty	3 Years			

Quality LifePO4 Lithium Battery

Main Features

- Lithium Iron Phosphate (LiFePO4) Battery
- Safest lithium chemistry with high energy density
- Built-in automatic protections
- Efficient & long-lasting up to 4000+ cycles DOD 50%
- >2000 cycles @0.2C, Charge/Discharge at 100% DOD Internal cell balancing
- Wide temperature range: -20°C ~ 70°C
- Maintenance free after installation
- Cost effective










Battery Spec	12V-24AH	12V-36AH	12V-42AH	24V-36AH	24V-42AH	12V-24AH
Battery cell type	LifePO4 6000mA 3.2V 32700					
Nominal Capacity	12.8V 24AH (307WH)	12.8V 36AH (460WH)	12.8V 42AH (768WH)	25.6V 30AH (768WH)	25.6V 36AH (921WH)	25.6V 42AH (1075WH)
Quantity per pack	16 pieces	24 pieces	28 pieces	40 pieces	48 pieces	56 pieces
Array Mode	4P4S	6P4S	7P4S	5P8S	6P8S	7P8S
Dimension (L*W*H)	140*240*75mm	210*240*75mm	210*240*75mm	210*240*75mm	210*240*75mm	210*240*75mm
Charge mode	C.C + C.V					
Charge Cut-off voltage	14.6±0.05V	14.6±0.05V	29.2±0.05V	29.2±0.05V	29.2±0.05V	29.2±0.05V
Discharge Cut-off Voltage	11±0.05V	11±0.05V	22±0.05V	22±0.05V	22±0.05V	22±0.05V
Storage Temperature	5°C ~ 35°C					
Operating Temperature	-20°C ~ 65°C					
Lifetime (D.O.D. 50%)	4,000 cycles D.O.D 50%					
Warranty	3 Years					

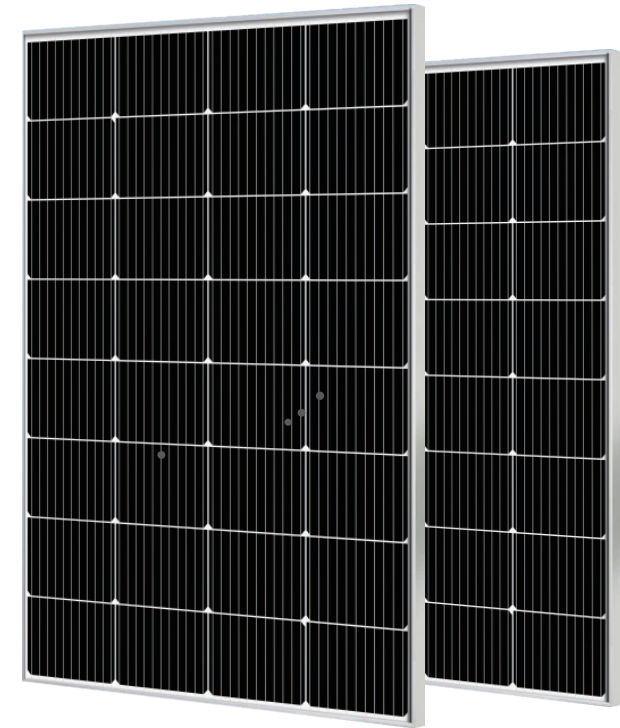
Monocrystalline Solar Panel

Certifications

- IEC61215, IEC61730 •
- ISO9001:2015 Quality Management Systems •
- ISO45001 : Environmental Management Systems •
- ISO45001:2018 Occupational Health and Safety Management System •

STC :  Light intensity 1000W/m²  Battery temperature : 25 C  Atmosphere quality = 15

NOCT :  Light intensity 800W/m²  Battery temperature : 20 C  Atmosphere quality = 15  Wind velocity 1m/s



Model number	MSD-080W	MSD-100W	MSD-120W	MSD-160W	MSD-240W	MSD-300W
Peak power / Pm(W)	18.0V	18.0V	18.0V	36.0V	36.0V	36.0V
Max. power voltage / Vmp(V)	6.67A	6.67A	6.67A	6.67A	6.67A	8.34A
Solar cells efficiency	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%
Dimensions(L*W*T)	550*760*30mm	680*760*30mm	800*760*30mm	1040*760*30mm	1530*760*30mm	1290*1134*35mm
Grade of solar cells	A grade					
Cable & connector	0.9M solar cable + MC4 connectors					
Operating temperature range	-40 °C - +85 °C					
Power output warranty:	IP65					
IP rate	10 years > 90%, 25 years > 80%					
Product Certifications / Standards	CE, ROHS ISO9001:2008, RoHSCE, IEC61215					



Zigbee System



Gateway (4G Sim Card inside)



Zigbee Module + Solar Controller

The zigbee control system is an integrated smart control system, the light control module is composed of two parts as solar controller and the signal module, These two parts are connected via the RS485 interface as the light control part. It communicates with the gateway with the Zigbee signal.

Comparison of Zigbee & 2G

Zigbee:

The bottom layer uses free wireless frequency communication, and the bottom layer data is transmitted to the Internet through a centralized gateway, so that one gateway can manage multiple street lights.

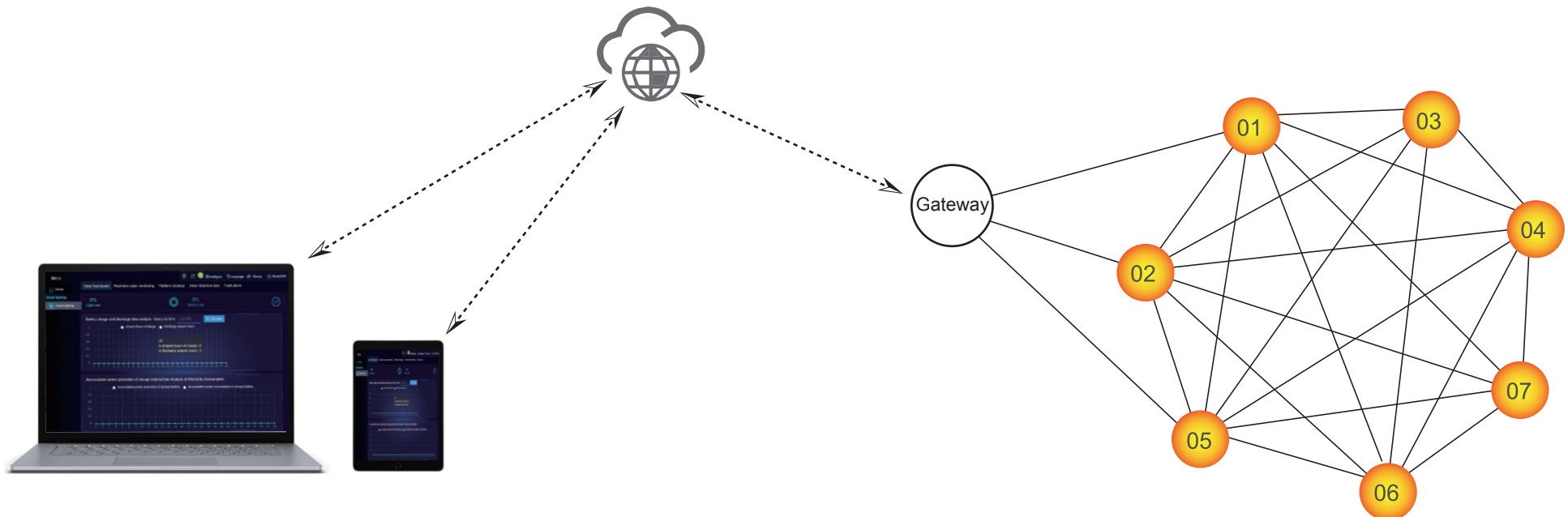
Advantages: when mass street lamps are used, the communication fee is relatively low.

2G/4G/GPRS/NB-IOT

The direct connection scheme is adopted, and there is no centralized manager, and the signal transmission is carried out through the base station of the mobile operator.

Advantages: The signal reliability and safety are relatively high, the construction is relatively simple, and there is no need to install a concentrator.

Disadvantages: The communication module and communication fees are relatively high.



More information, please refer to the Zigbee system datasheet of



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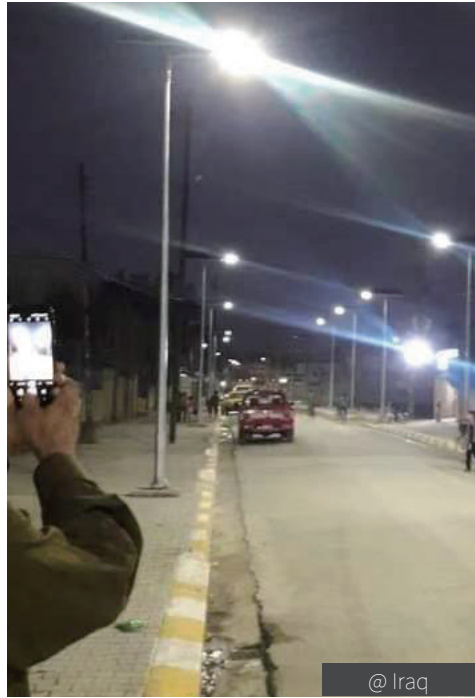
As the most classic model of solar led street light, HERMES is accredited by government customers in many countries.

In Oct 2021, The Chinese Consulate General donates auroras's solar lights to the Iraq government in Erbil. 270 complete sets of Hermes solar street lights 80W are installed on the main road of Erbil city to light up the nights.





@ Sri Lanka



@ Iraq



@ Syria



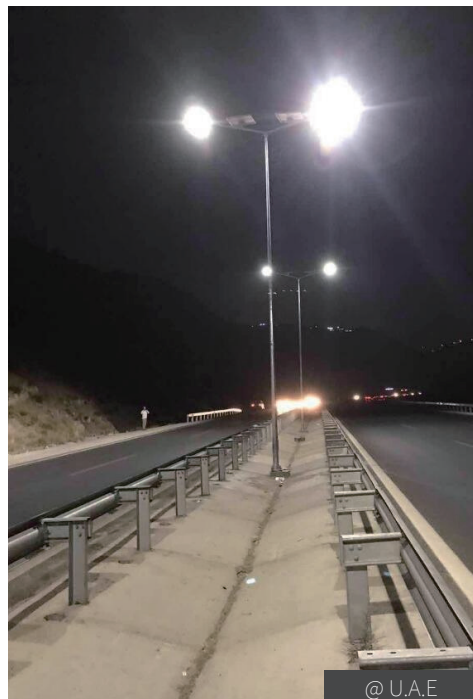
@ Syria



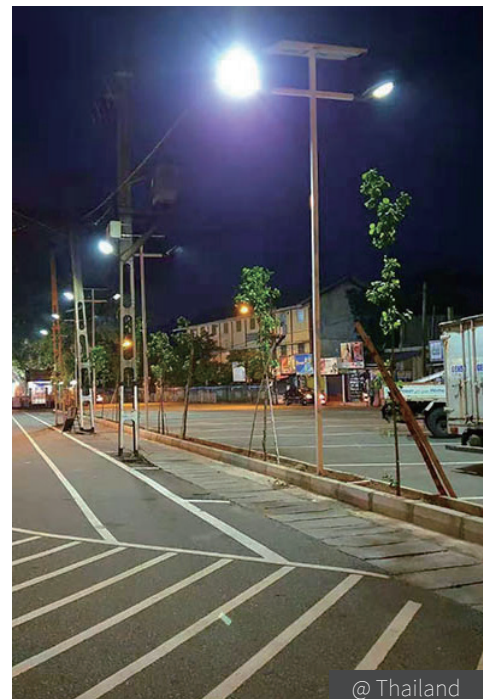
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