

ATHENS™

Solar Area Light



UP TO **180LM/W**

- SUPPORT 12HOURS UNDER 2-3 RAINY DAYS
- POWER: 60W/80W/100W



Bifacial Solar Panel
Efficiency Increased 30%



Rotatable LED Module
Easy Installation



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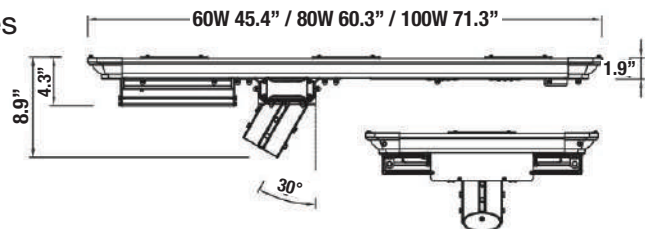
Solar Area Light

Outdoor solar lighting system uses solar cells which convert sunlight into electricity. Electricity is stored in the battery for use at night. Athens Solar LED Street Light features all in one design function, low profile design with PIR/microwave motion sensor and smartcontroller all built in with bifacial solar panel. Athens Solar Lights are easy to install and virtually maintenance free.

- Economical, easy to install, all in one integrated with bifacial solar panel on top and bottom for faster charging time.
- Philips LumiLEDs luxeon 5050 chip creates a first class light source 180 lumen per watt, with the aluminum lamp base and sealed lens with its excellent heat dissipation.
- The sealed lenses are made of strong UV protected PC and are aging and shock resistant.
- The light automatically switches on at dusk and switches off at dawn. 50% permanent lighting, when motion is detected power turns to 100%.
- Deep cycle battery, charge and discharge over 2000 times, continuously works 2-3 rainy days in intelligent mode.
- MPPT controller automatically track the maximum power point according to the weather variation, charging rate 30%.
- 180 Lumen per watt and IP65 & IK08 rated
- 3 Years limited warranty on all components
- Optional Accessory : Intelligent App Control, IOT Management system, Camera, Bird Spikes



Angle of Light Source: -60° / +60°



Model #	SKU #	Power	PV Type	Solar Panel	Lithium Battery	Lumens	CCT	Charge Time (Hrs)	IP Rating	Installation Height (Ft)
AVS-BF02-60W	786221	60W	MONO	100Wp	538WH 12.8V 42AH	10800 LM	5000K	6	IP65	26-29
AVS-BF02-80W	786441	80W	MONO	130Wp	768WH 25.6V 30AH	14400LM	5000K	6	IP65	32-36
AVS-BF02-100W	786331	100W	MONO	160Wp	922WH 25.6V 36AH	18000LM	5000K	6	IP65	39-42

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INTRODUCTION

Outdoor solar lighting systems use solar cells which convert sunlight into electricity. Electricity is stored in batteries for use at night. BF02 series solar lights are easy to install and virtually maintenance free. Using them won't increase your electric bill.

- **Solar All in One BF02 Street Light** features all in one design function, low profile design, with photocell sensor, timing, dimming, intelligent power saving, morning light, microwave sensor available.
- **Bifacial Solar Panel** design. Suitable for remote region, no-electric supply zone.
- Deep cycle battery, charge and discharge over **2000 times**.

FEATURES



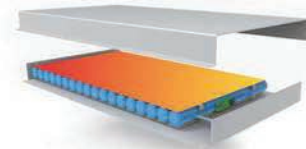
25 YEARS LIFESPAN



CONVERSION RATE UP TO 30%



INTEGRAL MONOCRYSTALLINE SILICON SOLAR PANEL



LIFESPAN CYCLE MORE THAN 2000 TIMES
INTELLIGENT TEMPERATURE CONTROL

- Die-casting aluminium housing, anti-corrosion coating.
- Easy battery replacement design, can be renewed for every 7 years.
- Ultra-high light efficiency, 10 watts equivalent to 20 watts of others at least.
- Bilateral solar panels, the overall conversion efficiency is increased by 30%.
- Rotatable LED module, worry-free installation, best solar panel angle adapt to the sun.
- Accurate optical road lighting designs, adapt to various conditions with no waste of light.

LED CHIP



LUXEON 5050

Philips Lumileds Luxeon 3030/5050 chip creates a first-class light source. By choosing Luxeon LED chips, single lumen value >180lm/w, with the aluminum lamp base and sealed lens, with its excellent heat dissipation, it is as if the LED chip has been placed in a sealed unit. Thus it maintains high brightness levels with very little fading. The sealed lenses are made of strong UV protected PC and are aging and shock resistant; The well optimized light distribution, makes for a more uniform and wider lighting area.

HIGH-LUMEN EFFICIENCY LED MODULE

Lumen efficacy > 180lm/w, achieve higher illumination



Angle of Light Source: -60°/+60°



High luminous efficiency



Long lifespan

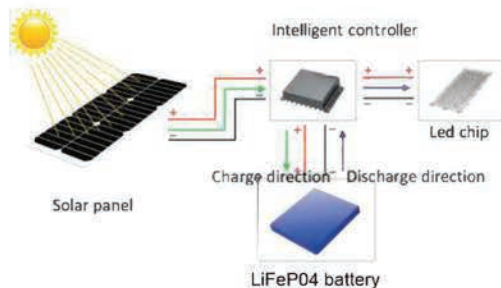


Less heat



Low light decay

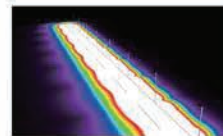
WORKING WAY



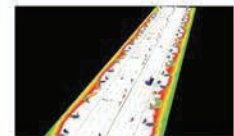
Where there is light radiation, photovoltaic modules are converted to electric energy by solar radiation, and intelligent controller is used to charge electric energy into lithium iron phosphate battery. At the same time, the intelligent controller protects the overcharge and over discharge of the battery. The lighting switches and adjust lighting intelligent control, without manual operation.

PHOTOMETRICS DESIGN

Planning and analyzing of street lights can be done by using lighting design software, which allows lighting simulations. It uses rendering, the process of generating an image from a model, by means of computer programs resulting in different tools for measuring the simulate light levels.



Example of urban branch road



Example of main road and parking lot



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TECHNICAL SPECIFICATIONS

Optional Accessories

- 4KV
(Surge Protector)
- Intelligent APP control
- IOT Management
- AC & DC complementary
- USB power
- Alarm
- Security camera

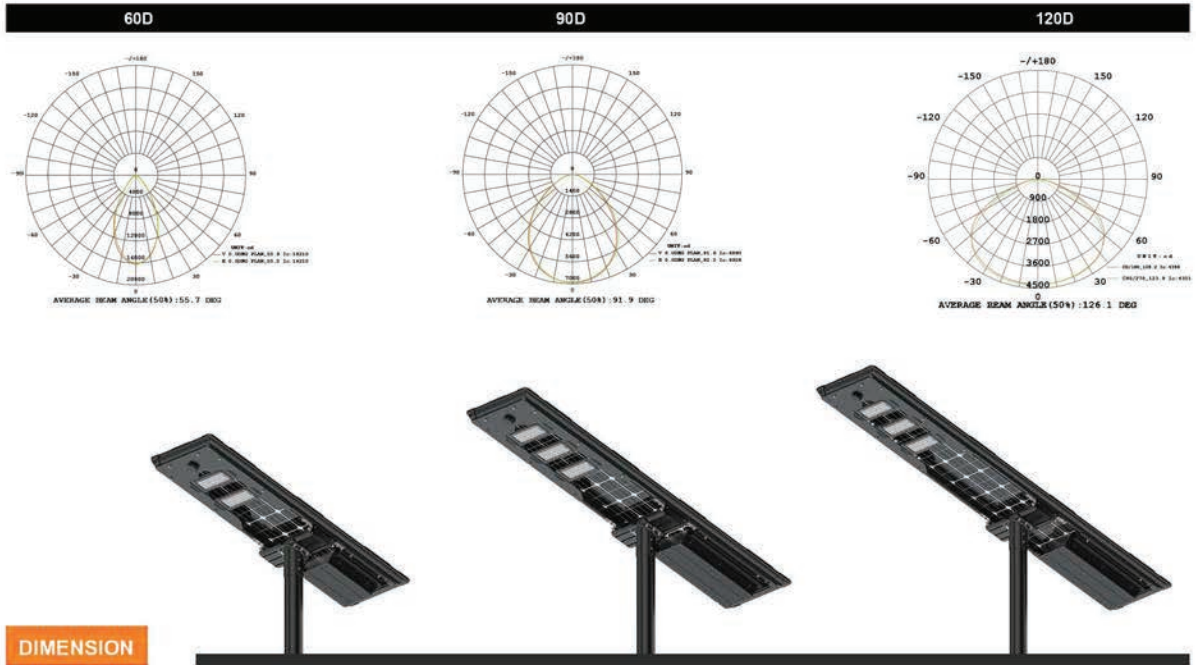


	AVS-BF02-60W		AVS-BF02-80W		AVS-BF02-100W	
Wattage	60W		80W		100W	
LED Chips	3030	5050	3030	5050	3030	5050
Lumen Output	9000lm	10800lm	12000lm	14400lm	15000lm	18000lm
Solar Panel	18V100W		36V130W		36V160W	
Efficacy	150lm/w	180lm/w	150lm/w	180lm/w	150lm/w	180lm/w
Optional Beam Angle	60°/90°/120°					
CCT	3000K~6500K					
Input Voltage	12-24V DC					
LED Driver	Meanwell OR Others					
IP & IK	IP65 & IK08					
Photovoltaic panel	Double crystal photovoltaic panel					
Power of PV Module	100Wp		130Wp		160Wp	
Li-on Battery	538WH		768WH		922WH	
	538WH 12.8V42AH		768WH 25.6V30AH		922WH 25.6V 36AH	
Charing Time	6hrs		6hrs		6hrs	
Run Time(@full power)	8hrs		8hrs		8hrs	
Installation Height	8-9M(26-29ft)		10-11M(32-36ft)		12-13M(39-42ft)	
Opertating Temperature	-20°C to 50°C (-4°F to 122°F)					
Charing Temperature	-0°C to 65°C (32°F to 149°F)					
Control system	MPPT intelligent controller					
Maximum Autonomy	Operate under 2-3 rainy days					
Motion Sensor Mode	30%-100% 28hrs		30%-100% 28hrs		30%-100% 28hrs	
	20%-80% 40hrs		20%-80% 40hrs		20%-80% 40hrs	
Constant Mode	100% 8hrs		100% 8hrs		100% 8hrs	
	70% 12hrs		70% 12hrs		70% 12hrs	
	40% 20hrs		40% 20hrs		40% 20hrs	
Control Options	Photocell sensor, timing, dimming, intelligent power saving, morning light, microwave sensor available					



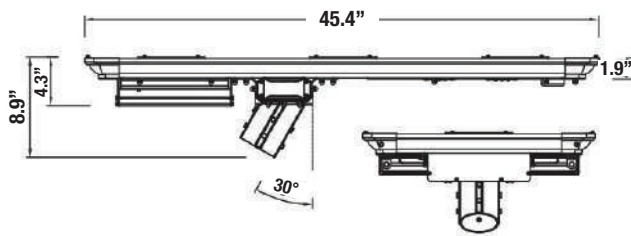
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PHOTOMETRY

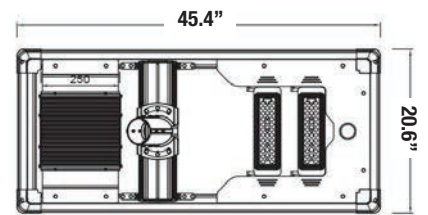


DIMENSION

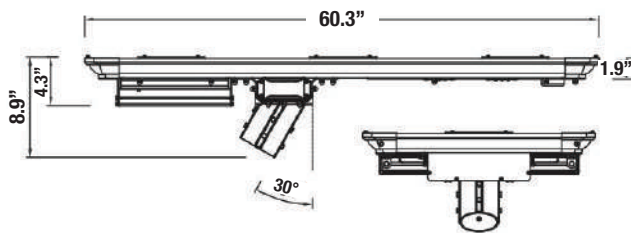
AVS-8F02-60W



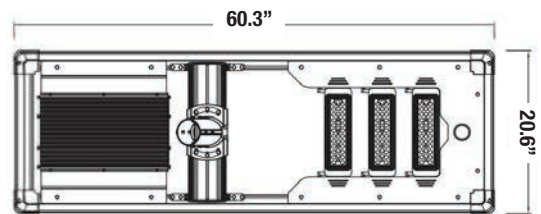
60W



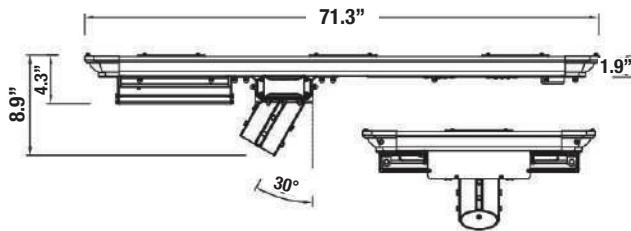
AVS-8F02-80W



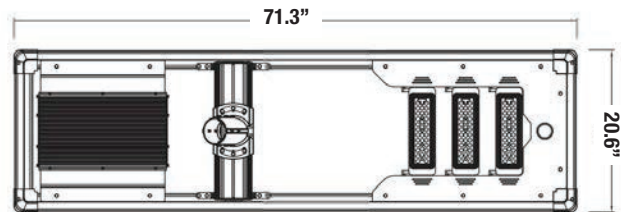
80W



AVS-8F02-100W



100W



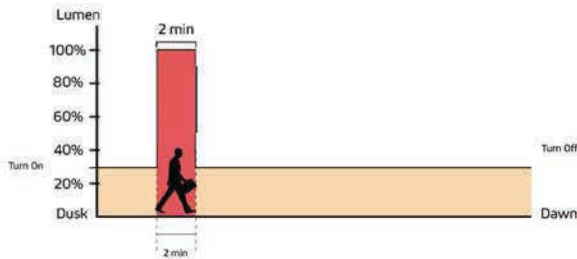
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AUTONOMY CONTROL GUIDE

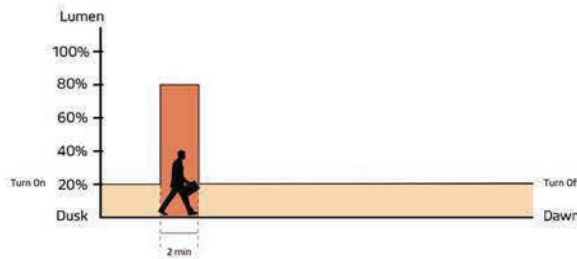
30%~100% MOTION SENSOR MODE

Constant 30% brightness (turns on at dusk, turns off at dawn);
100% brightness turns on for 2 minutes when motion is detected.



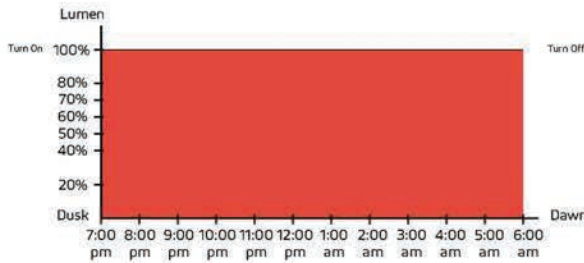
20%~80% MOTION SENSOR MODE

Constant 20% brightness (turns on at dusk, turns off at dawn);
80% brightness turns on for 2 minutes when motion is detected.



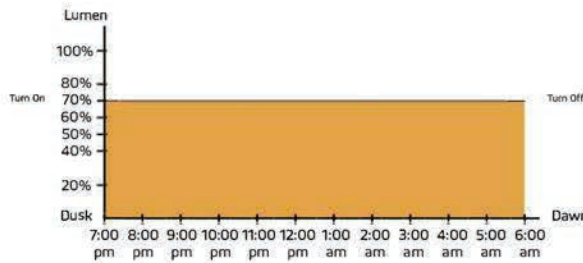
100% CONSTANT MODE

100% brightness from dusk to dawn.



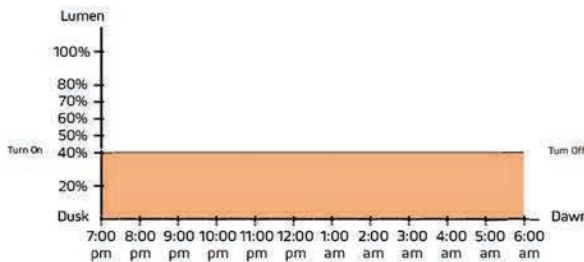
70% CONSTANT MODE

70% brightness from dusk to dawn.



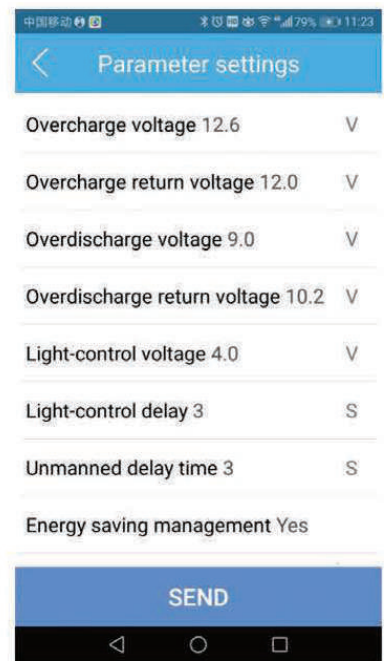
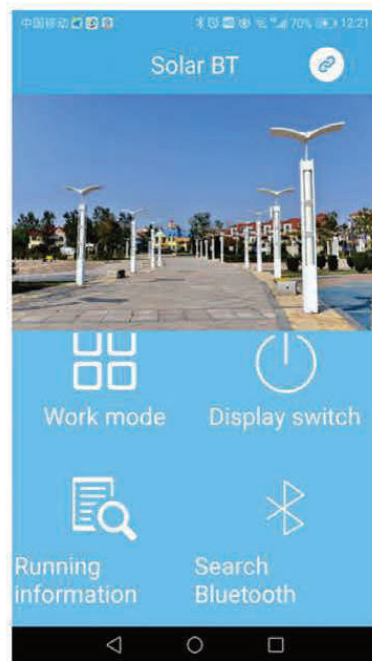
40% CONSTANT MODE

40% brightness from dusk to dawn.



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MOBILE BLUETOOTH APP

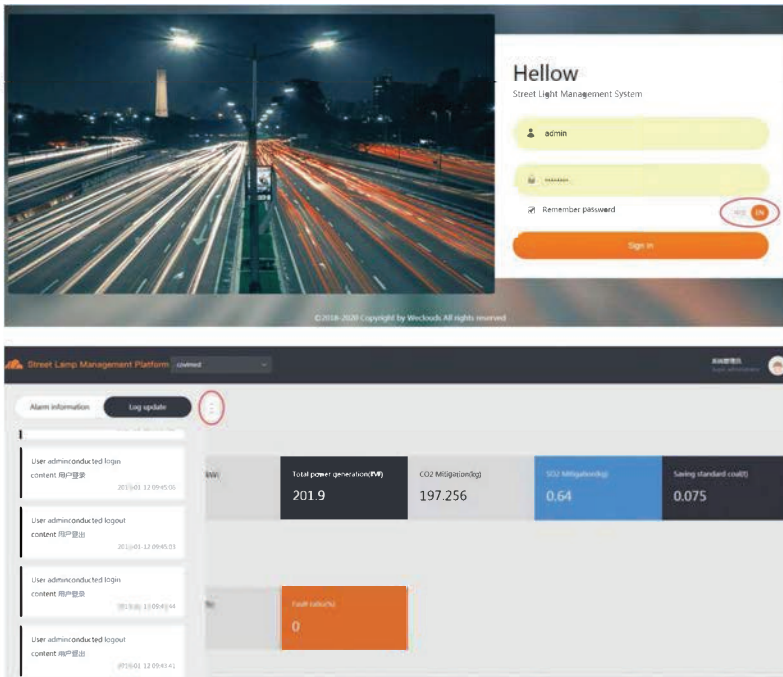


- Multiple lighting modes can be programmed remotely by Mobile Bluetooth APP Solar Street light with inbuilt Bluetooth for health monitoring with APP

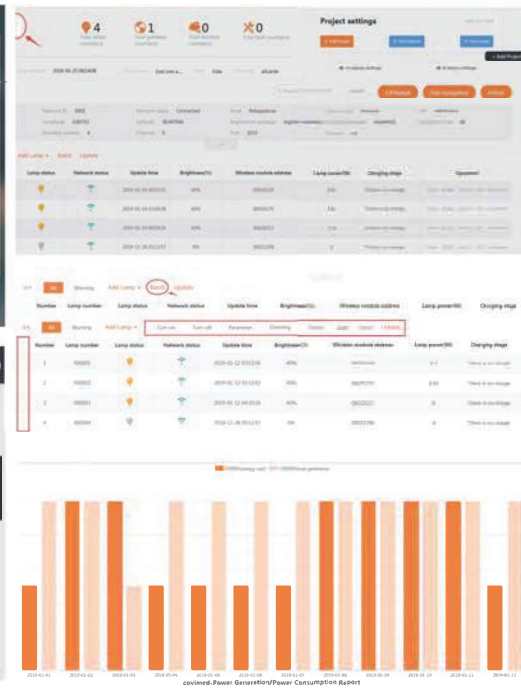


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SMART LIGHTING CONTROL SYSTEM



DATA & PROJECT MANAGEMENT



The system can pre-set one or more lighting modes according to different time of day and traffic flow, automatically turn on or off any lamp, and adjust the switching time and illumination according to environmental requirements to achieve the purpose of energy saving and consumption reduction.

IOT MANAGEMENT, INTELLIGENT LIGHTING

We perfectly combine traditional solar street lighting architecture+Internet of things + wireless communication technology perfectly, achieve monitoring and management of remote background data, real-time understand the normal working status of each component of solar energy (street lights, photovoltaic panels, batteries, controllers), allow you to know the end customer's product usage that is thousands of miles away without leaving home, or to manage the opening and closing of street lights and the adjustment of bright spot power in a timely manner.



Remote monitoring real time monitoring

BF02 series with wireless communication function, Through the intelligent management system of solar street lamp and wireless module, have remote monitoring and real-time monitoring.



Automatic fault alarm

Real time monitoring of solar panel voltage, current, power, battery charging and discharging current, voltage, load working state, controller working state data and fault automatic alarm.



Remote control

Support remote switch on and off dimmer and battery, load parameter modification.



Fault tracking and precise positioning

Multi peak PWM technology, suitable for partial shading or partial damage of photovoltaic cells, and the tracking efficiency is more than 99%.



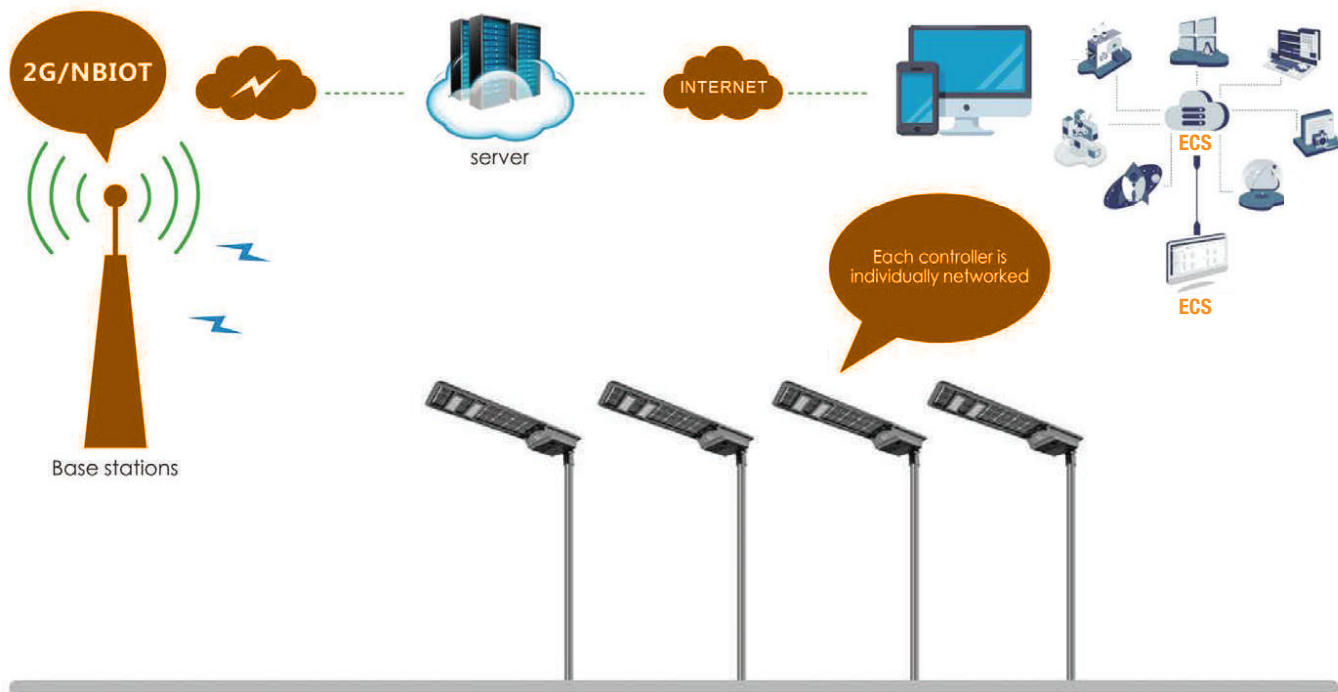
Map location

Using GIS maps, with geographic display capabilities.



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The Internet of Things solar street light management system is mainly composed of a street light component+a centralized controller+a single light controller+a smart cloud platform. The centralized controller and the single light controller aggregate the data collected by the single light via the GPRS/NB-IOT wireless communication network. The centralized controller uploads data to the system cloud platform through GPRS data flow, providing data dependence for mobile phone and computer terminal access.



PERFORMANCE COMPARISON BETWEEN SMART IOT SOLAR LED STREET LIGHT AND TRADITIONAL STREET LIGHT

Solar led street light controller type	PWM+IOT controller	Instruction
Light decay detecting	✓	Automatic light decay detection and adjustment
Charging in rainy days	✓	PWM charge 3 rainy days is equivalent to a sunny day
Battery management	✓	Battery lifespan management
Remote monitoring	✓	Remotely monitor the status of each street light in real time
Optimize configuration	✓	Through data analysis, complete the optimal configuration of solar panels and batteries in different regions
Fault alarm	✓	Automatically detect system failures and alert to mobile phones or computers
Intelligent analysis	✓	Automatically collect the detailed data for per light at per night, and statistical report analysis
Artificial intelligence	✓	Big data collection and analysis through the system platform, complete the intelligent operation of street light and achieve stable lighting throughout the year



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