



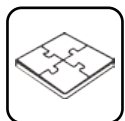
bluesmart

SWAN SERIES (CATALOGUE 2017)

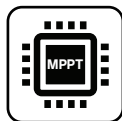
Smart Solar Street Light

Solar Swan Light, Bluesmart's 2017 newest design patented product, especially created for horizontal installation on single arm or double arm street poles.

Solar Swan Light has been a major updated, adapt a new technology which includes charging management of MPPT(Maximum Power Point Tracking), new optimized light distribution scheme and multi platform wireless control system, providing a flexible solution for the management of street lamp, customization of working mode and remote real-time control.



all in one design



smart control system



battery management system



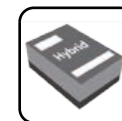
microwave sensor



remote operation system



battery monitor system



city electric complementary

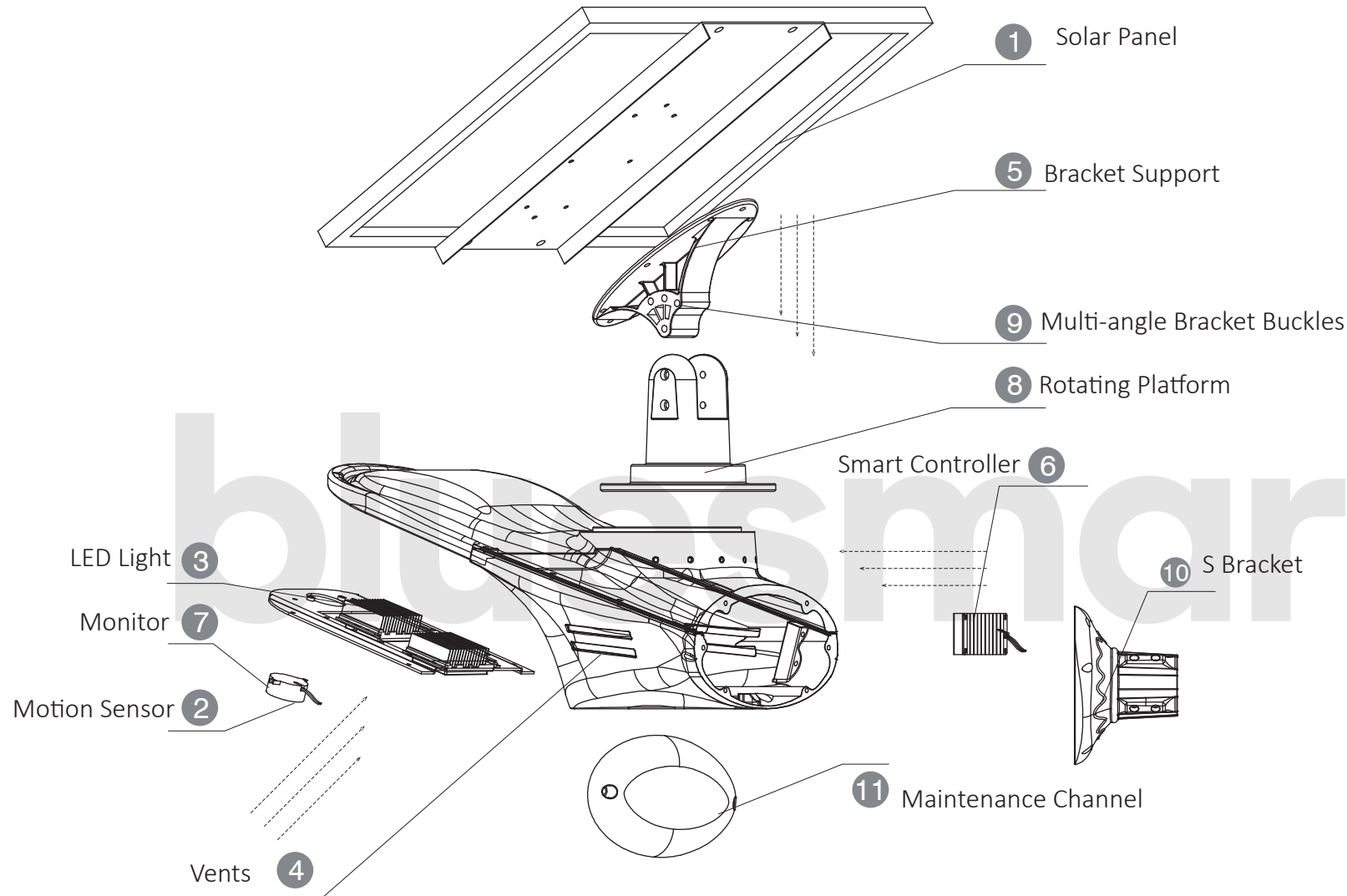
Patented Product

Solar Swan Light

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IAF CE FCC RoHS IP65



All components with modular seal design, protection class up to IP65, with high reliability and maintenance convenience.

The whole lamp shell with high strength and superior weather resistance, and high precision die-casting aluminum material, fasteners using stainless steel anti-theft design, there is no need worry about it being stole in the future.

Innovative Design-adjustable solar panel



Special for Somewhere



High latitudes area



Sunshine shortage area

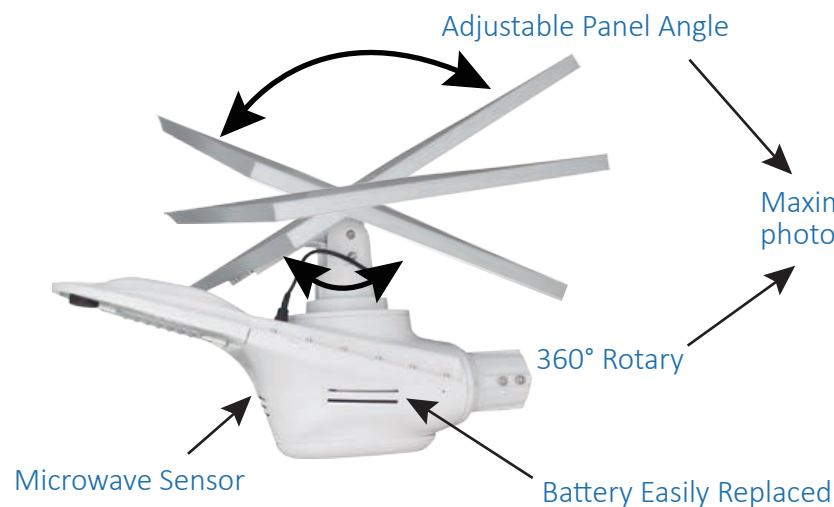
360° rotating platform including an adjustable bracket (5 angle) and 360° rotating platform, user set the direction of the solar panel and the light according to the position of the sun and the angle of lighting application.

All In One Comparison

Advantages

Solar Swan Light

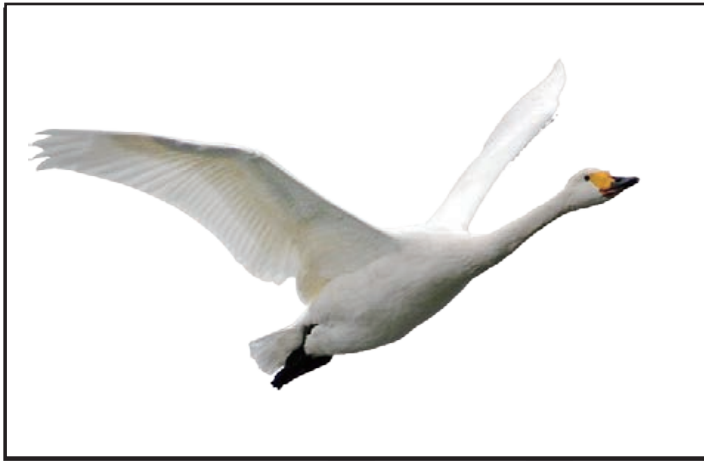
Normal Solar Street Light



VS

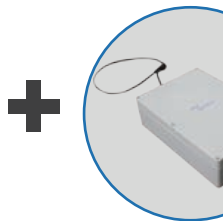
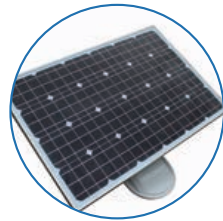


“SWAN” shape light body modern and elegant appearance



Certificate of Design Patent

Innovative All In One Design



Bridgelux LED Light

Mono Solar panel

Rotating Platform

MPPT Controller

Microwave Motion Sensor

LiFePO₄ Battery

Solar Swan Light

Modular design and plug style won't need wiring and welding any more, easy to ship, install and maintain.

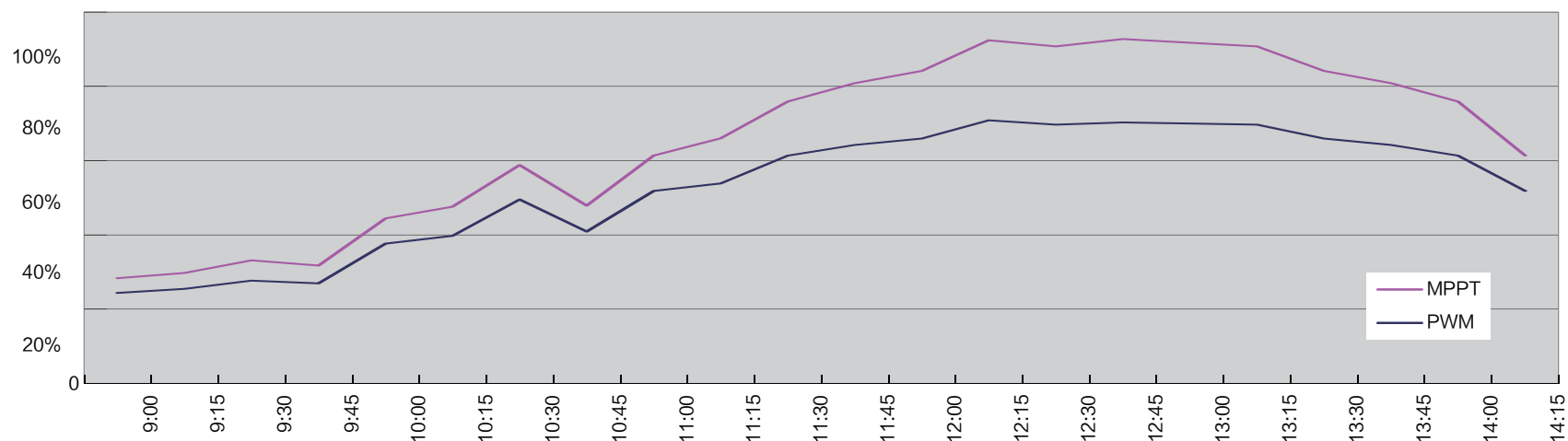


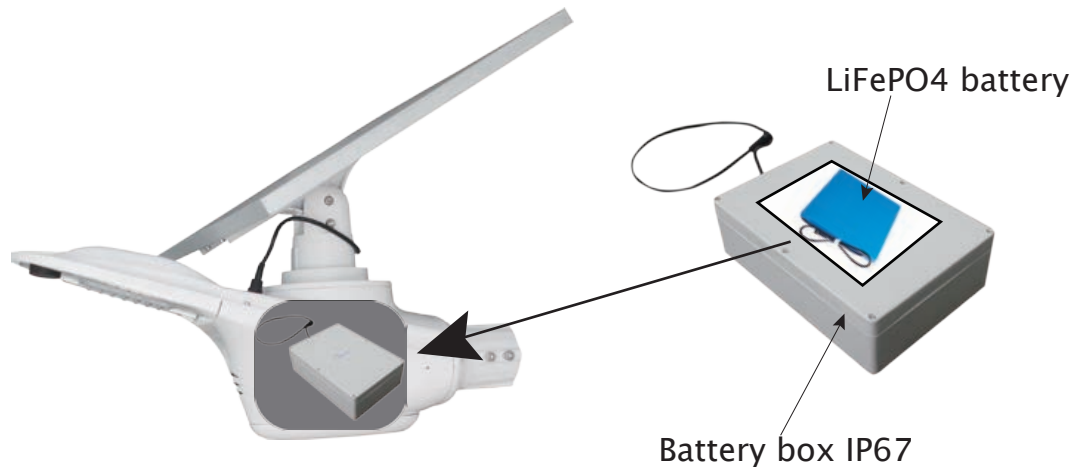
MPPT Controller

MPPT (the highest power chase) controller can automatically adjust the output power according to the weather changing, compared to PWM controller, charging efficiency has increased by **16%-30%**.

- ✓ With the fourth generation of microwave sensing technology, illumination levels will be automatically regulated when it detects movement, more energy-saving, more humanized.
- ✓ Six time period programmable bearing power control, the output power and time period can be set, most intelligent control charging and discharging 's multi-working mode , ensure the system running more efficiency.
- ✓ Visualization of real-time monitoring system, real-time inspecting the battery charging and discharging state and the battery capacity outside.

Charging Efficiency Comparison





Tenary Lithium battery

It will be exploded when the temperature is high.



Lead Acid battery

The efficiency of charging and discharging is low.

- ✓ Bluesmart uses new-generation lithium LiFePO₄ batteries instead of the traditional lead acid batteries, offers 4 times higher discharge depth, 5 times higher cycle life, 4 times more storage and power capacity and will not pollute the environment.
- ✓ Our battery design uniquely features many 'small' lithium iron batteries packed into a 'dual' battery assembly that minimises stress and heat during both discharging.
- ✓ Our LiFePO₄ batteries are able to work in extreme heat of up to 65 degree Celsius & some products can even have an optional thermal heating module added to keep the lights operating in sub-freezing conditions as low as -40 degrees.
- ✓ Bluesmart use an exclusive patented technology battery management program, enabling the lifetime of battery to last for over 5 years, greatly improving the ROI and helping to sustain the earth's resources.

Bridgelux LED

Bridgelux outdoor special LED, patent multi-core
high efficiency LED, luminous efficiency value up to
210lm/w.

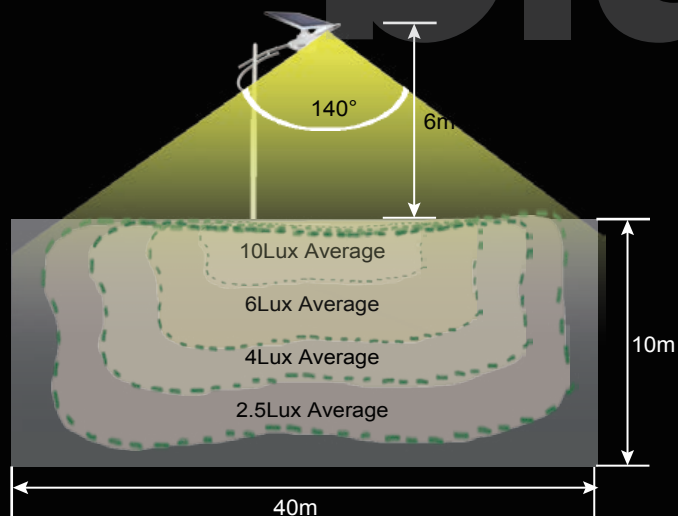
Wide Beam angle lens

New design patent light distribution lens, significantly
improve light effect.

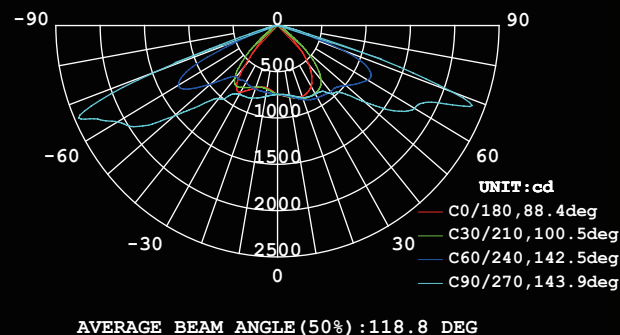
Compared the previous generation products, lighting area
is expanded by 40%, lighting uniformity increase to 200%.



Light distribution



Illuminance distribution



Light intensity diagram



The fourth generation of sensing technology

People and car come full brightness mode,
people go far dim-mode, extend lighting time.

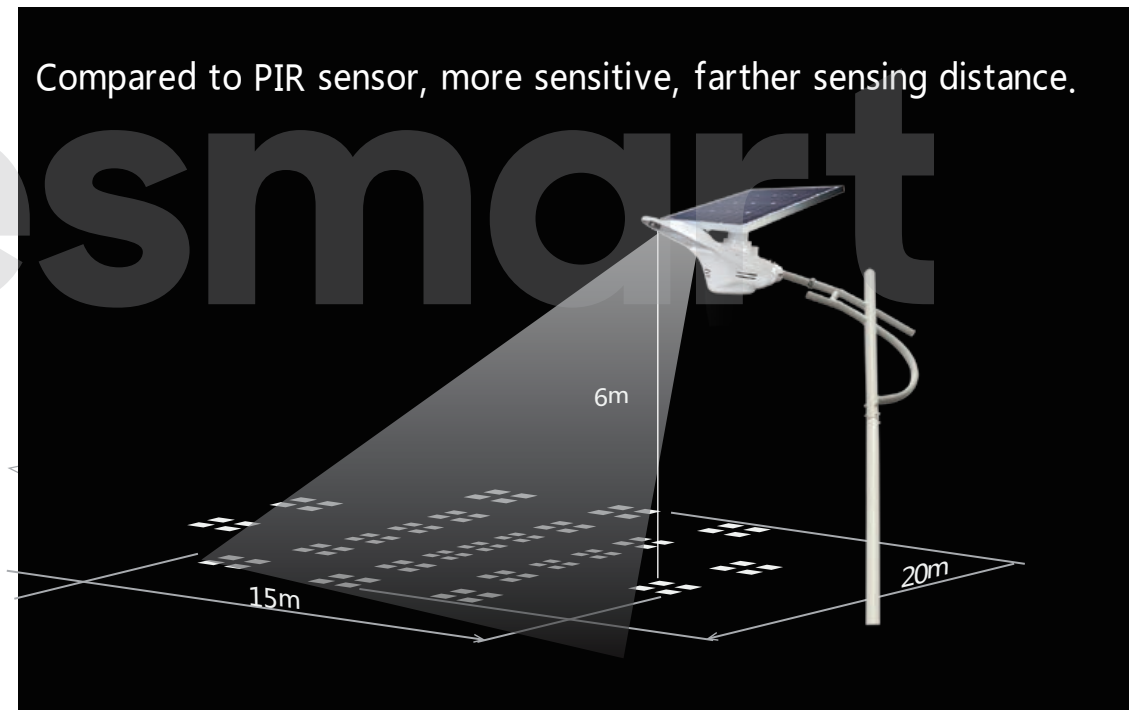


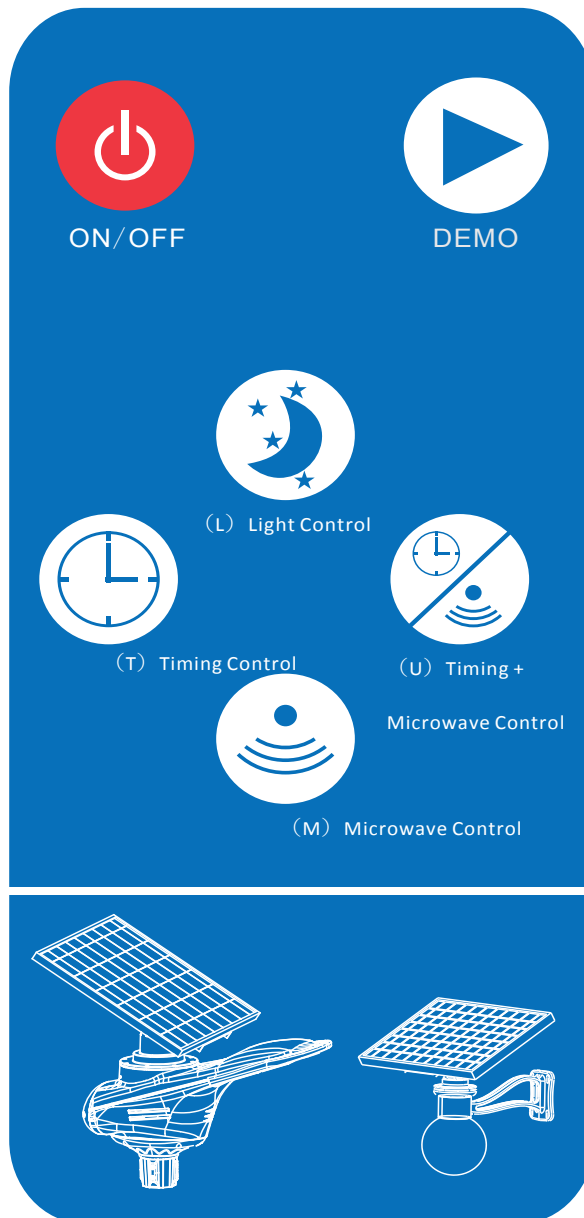
θ (Angle)	h (Height)	d (width)
70°	5m	15m

Microwave sensors are more accurate than infrared(PIR) sensors in detecting human movement and moving object, detection distance is up to 15 meters.







With the addition of the smart Microwave motion sensor, Illumination levels will automatically be regulated from a 'dim-mode' to 'full-brightness', depending on whether the distance is within the range of motion sensor detecting of the integrated solar street light.

Compared to PIR sensor, more sensitive, farther sensing distance.





Humanized intelligent Remote Control Technology

-  ON/OFF : Light 'on' or 'off' no matter day or night.
-  DEMO : No matter day or night, light 'on' for 1 mintue. Only for test use.
-  L : 100%-1hr, 70%-3hrs, 20% till dawn.
-  T: 100%-2hrs,70%-2hrs, 50%-2hrs.
-  M: 100% if people come close, 30% far away.
-  U: 100%-2hrs, 70%-2hrs, 50%-2hrs, sensor working 50%, if people come close, 20% far away.

Remark: Default is M mode, you can choose the best mode according to different sunshine condition.

(Customized working mode as respect to customer's different requirement)

Light panel utilises a new CNC production technique and is fabricated from aluminium extrusion which improves LED thermal heat dissipation by up to 115%, this in turn improves the longevity of the LED's and protect the battery, ensure the light working temperature will not too high, promising more long term system reliability.



Light panel (aluminium alloy material)

Heat dissipation channel

when it's rainy, water can enter into the body, but the pole is hollow so the water can not be stored in the light body.

1. The lamp body are die-casting aluminum material which is available for heat dissipation.
2. All parts of our Swan Light have IP65-IP67 waterproof grade.



Lightning Protection ☒



Windproof(18 grade) ☒



Dust and Sand Protection ☒



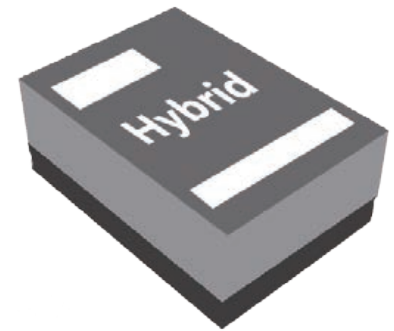
Waterproof ☒

Q Can I charge the solar swan light utility/Grid?

A **YES!**
Optional AC or DC input capability is here.

? How to change to City Electric complementary?

Bluesmart's Fly Hawk and Swan solar lights can be equipped with optional AC or DC input capability, which allows the LEDs to run either battery power or 'mains' Grid Utility Power.



? How does it work?

The EHC will automatically switch to AC 'mains power' input when the battery is insufficient, therefore preventing the battery from over discharging.

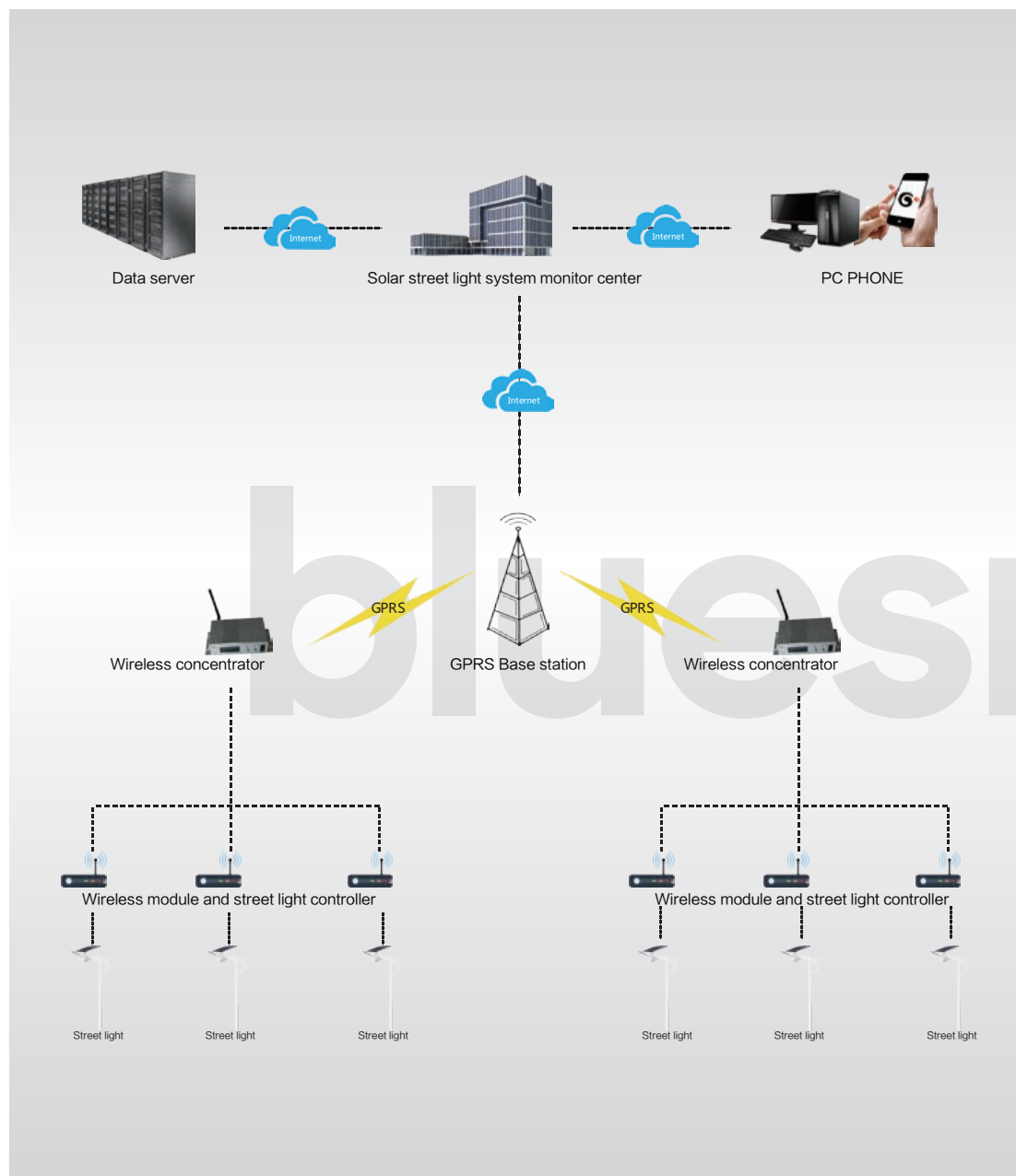
? What is the advantage?

Through this way, the light can keep lighting no matter when the battery is short of power, so there is no need to worry about the condition that what if the battery is over discharging.

? What is the difference between the City Electricity complementary mode and solar power supply mode?

The biggest difference is that the EHC has optional AC or DC input capacity, on the condition that the battery is short of power, it can automatically change into AC input capacity, using 'mains' Grid Utility Power in time, while solar system can not do that.

Solar Street Light System Feature And Management Center Internet



Wireless control system

GPRS wireless module realizes real-time control, self-defined working modes and historical data query and more functions.

You can do the following operations using computer or APP:

Lighting control

Control turning on/off the light and illuminating brightness.

Historical data

Check generating capacity in per day, internal temperature of product and detailed charging data.

Working mode

Customers can customize working mode according to their require.

State monitor

Real-time monitor every part at their normal working condition, such as battery consumption, load power, temperature, surplus electricity consumption.

Notice: Please do not need Press ON button of the small blue remote to turn on the lamp, because our solar lamps have Automatic Activation Function.

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Activation test:

Remove the swan light from package box, let the solar panel absorb energy from sun, connect the waterproof cable between solar panel and lamp, then the lighting system can be activated, the fly hawk light will be lighting automatically at night.

If you want to check whether the swan light are lighting during the daytime:

*Cover the solar panels with shelters, the lamp will be lighting.

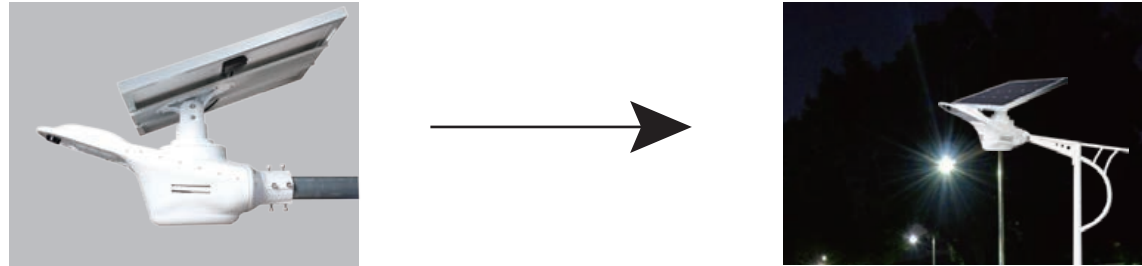
*Press Demo Button after the lighting system has been activated, the lamp will be lighting for a few mins then turn off automatically.



Precautions:

- Solar Swan Light, need solar power to charge battery, please select appropriate model based on local sunshine conditions.
- Please avoid solar panel be block by building, trees or other obstructions, otherwise it will reduce efficiency of solar panels working, resulting in lower efficiency of system.
- Charging temperature of Lithium battery is 0°C to 55°C, the discharging temperature is -20°C to 60°C make sure that ambient temperature is in this range when used, avoid to damage lithium battery.
- Please cleaning surface of solar panels regualr, such as dirt, leaves, oil and etc. Ensure high photoelectric conversion efficiency.
- Cleaning snow of solar panel surface timely in winter.

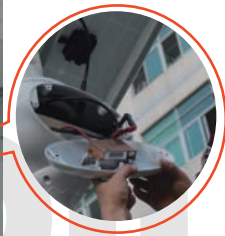
Easy installation in 5 minutes



Quick maintenance channel



1. Loosen the rear's two anti-theft screws, open the rear cover.



2. Unplug the controller above the four aviation plug, then can remove the four components.



3. Loosen the four screws in the rear cover and remove the controller.



4. Loosen the eight screws on the light source module to replace the light source module.

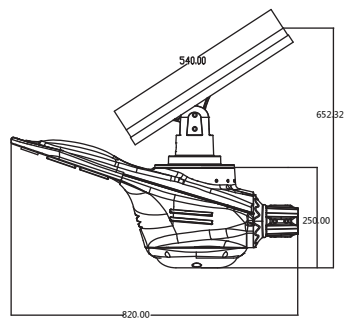


5. Loosen the two screws on the sensor to remove the sensor.

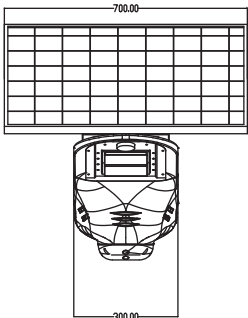


6. Solar panel angel can be adjustable easily.

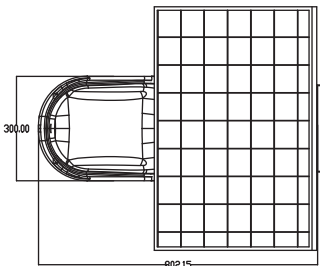
Product dimensions(mm) (lamp size: 700x540x290mm)



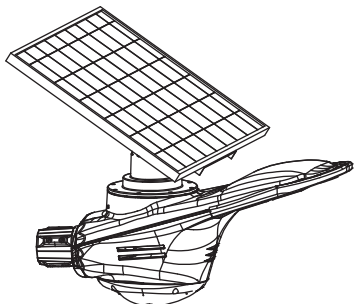
(Side view)



(Front view)



(Top view)



(Main view)

Product Packaging(mm) (packaging size: 755x440x325mm)



solar panel packaging







bluesmart

Smart Solar Street Light

Bluesmart reserves the right to improve product performance, structure and appearance without notice. If the description is not consistent with the physical case, please prevail in kind. Bluesmart guarantees that the contents of this specification have been calibrated and will not be liable for any loss whatsoever.

Bluesmart Solar PV Co.,Ltd

Add: 4/F, 6th building, Hengguangyao industrial Park, Yonghe Road, Fuyong Town,
Bao'an District, Shenzhen City, Guangdong Province, China.

☎ 0755-33115828

☎ 0755-33115028

✉ info@obluesmart.com

🌐 www.obluesmart.com