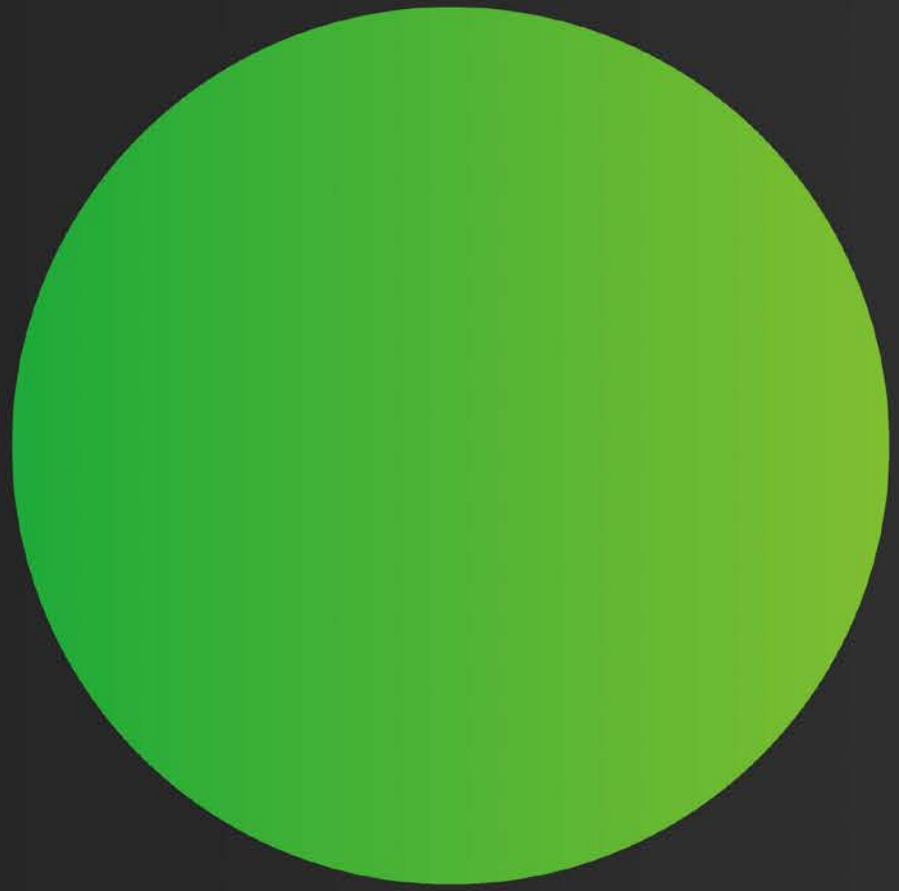
SUNMASTER



01 Over View
02 Main Components
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Overview



The Solar&wind street Light is a revolutionary product by utilizing Photovoltaic effect and wind power. It is designed to constantly absorb solar energy in daylight, wind energy all the day and convert to electricity, the intelligent controller could precisely control the charge, discharge and well preserve electricity into the lithium battery.

And start to illuminate, which is powered by the lithium battery, once the illuminance of ground reduced to 15 lux in night time, or solar panel voltage drop to 5V below. The intelligent controller not only protects the battery from over-charging, over-discharging, but also can control the light switch-on, the time of switch-on and optimize the brightness effectively according to the real-time environment.

Main Components

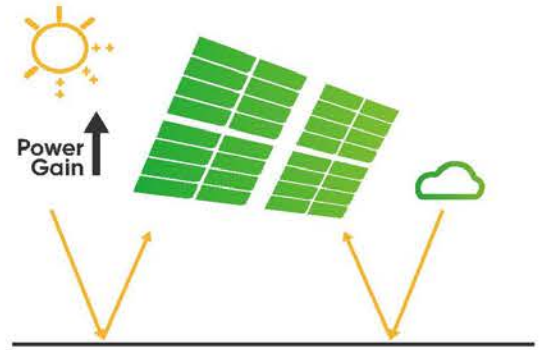
Wind turbines

When determining the wind turbine's power, factors worth considering include the length of the period during which there is no effective wind speed, the lowest monthly average wind speed, the total annual electricity consumption, and the monthly average minimum electricity consumption. The lowest monthly average wind speed over the course of the year determines the wind turbine's rated wind speed.



Solar Panel

SUSTAINABLE Renewable energy from the sun combined with efficient panels provides financially smart technology, a clean alternative that improves walkability



LED Module

SunMaster offers a versatile range of LED light heads that have the flexibility to be used across our entire range of solar engines; All light heads incorporate 'plug & play' IP67 cable connections and operate on either 12V D.C, 24V D.C or optional 240V A.C.
The light heads feature a robust construction and offers flexible installation options from a 'wrap around pole bracket' or 'spigot installation' to being able to fix directly onto a flat surface.



Battery Protection

Built tough to withstand the harshest and most extreme environments has to offer,from blistering heat to freezing conditions.What ever the environment is, SunMaster lithium battery's and smart protection features are up for the challenge;Our lithium battery's are able to work in extreme heat of up to 60 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.



SunMaster has adopted new MPPT technology to further ensure the maximum amount of charge is delivered to the Lithium Iron batteries, the charge efficiency can be increased by up to 30% whilst the solar panel is exposed to direct sunlight.



Mono-Crystalline solar panel collects the suns radiation & converts to D.C voltage



MPPT (Maximum Power Point Tracking) Controller



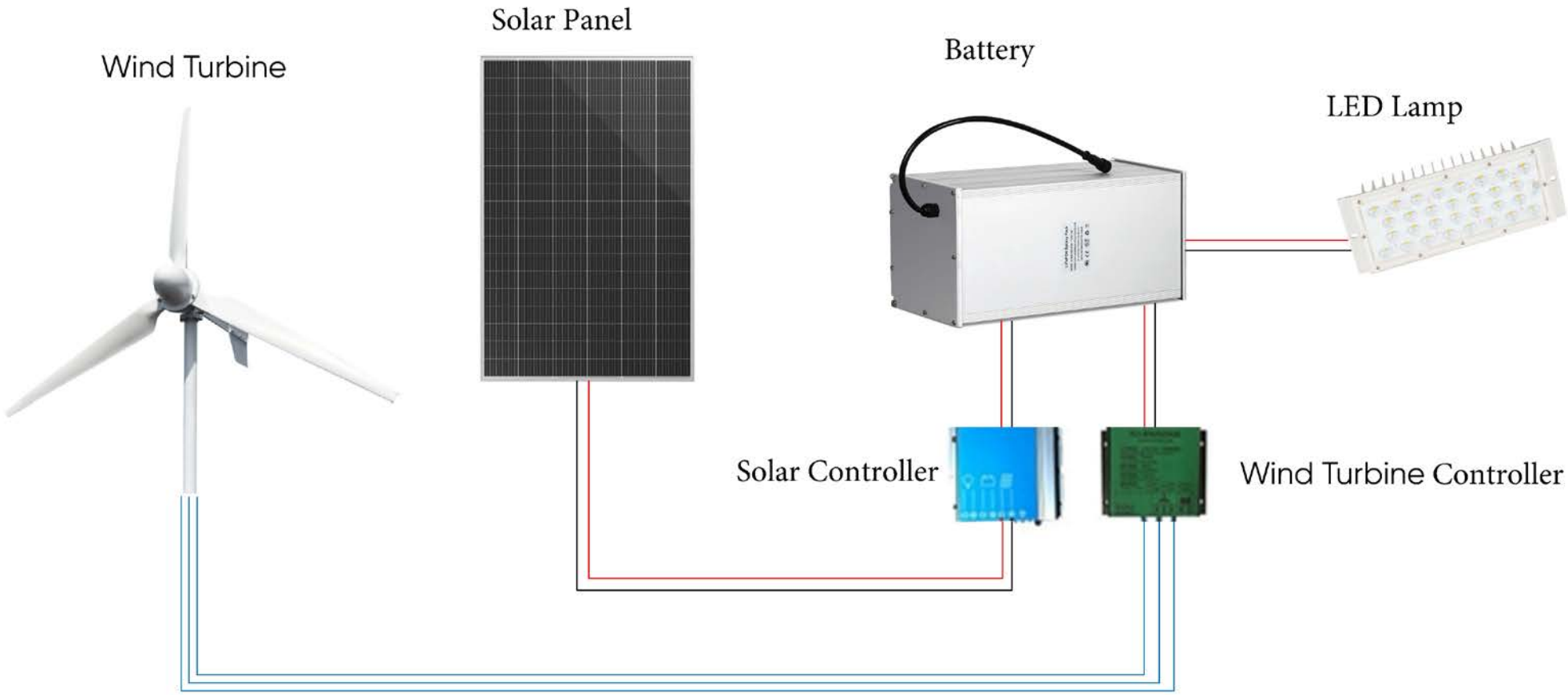
Lower power consumption during conversion phase

Increase battery charging efficiency

Light pole

To guarantee that the operation of the wind turbine is not impacted, the height of the light pole should be chosen in accordance with the environment. Typically, solar cell modules should avoid interfering with the wind turbine's blades.

Connection Drawing



Turbine Type



Horizontal Type



Vertical Type



H Type

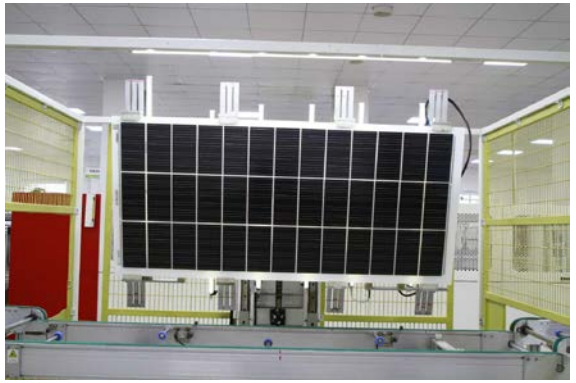
Workshop Photo















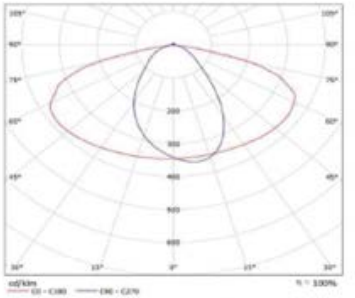


Specification

Model	Lamp Power	Wind Power	Battery Capacity	Solar Panel Power
SMWD-ST30W	30W	1*100W	12.8V/24AH	1*50W
SMWD-ST40W	40W	1*100W	12.8V/30AH	1*80W
SMWD-ST50W	50W	1*100W	12.8V/36AH	1*80W
SMWD-ST60W	60W	1*100W	12.8V/42AH	1*120W
SMWD-ST70W	70W	1*100W	12.8V/48AH	1*150W
SMWD-ST80W	80W	1*100W	25.6V/24AH	1*180W
SMWD-ST90W	90W	1*200W	25.6V/30AH	1*200W
SMWD-ST100W	100W	1*200W	25.6V/30AH	1*250W
SMWD-ST120W	120W	1*200W	25.6V/36AH	1*300W
SMWD-ST150W	150W	1*200W	25.6V/48AH	1*360W

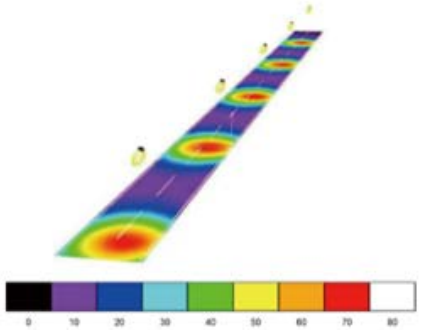
Luminaire Data Sheet

Luminous emittance 1:



Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

Street/ False Colour Rendering



Specification

Model	Picture	Product Description
SM-100		100W/24V/12V, 22kg, height 960mm, diameter 1050mm, aluminum alloy blade, starting wind speed 1.3m/s, rated wind speed 13m/s, rated speed 500rmp
SM-300		300W/24V, 27kg, height 1080mm, diameter 1240mm, aluminum alloy blade, starting wind speed 1.3m/s, rated wind speed 13m/s, rated speed 700rmp
SM-400		400W/24V, 30kg, height 1100mm, diameter 1240mm, aluminum alloy blade, starting wind speed 1.3m/s, rated wind speed 13m/s, rated speed 700rmp
SM-1000		1000W/48-96V, 90kg, height 1560mm, diameter 1950mm, aluminum alloy blade, starting wind speed 2m/s, rated wind speed 13m/s, rated speed 450rmp

Model	Picture	Product Description
SM-300H		300W/12/24V, 20kg, height 1000mm, diameter 800mm, aluminum alloy blade, three blades, starting wind speed 3m/s, rated wind speed 12m/s, rated speed 400rmp
SM-400H		400W/12/24V, 30kg, height 1300mm, diameter 1000mm, aluminum alloy blade, three blades, starting wind speed 3m/s, rated wind speed 12m/s, rated speed 450rmp
SM-500H		500W/24-96V, 45kg, height 1500mm, diameter 1200mm, aluminum alloy blade, three blades, starting wind speed 3m/s, rated wind speed 12m/s, rated speed 400rmp
SM-600H		600W/24-96V, 45kg, height 1800mm, diameter 1600mm, aluminum alloy blade, four blades, starting wind speed 3m/s, rated wind speed 12m/s, rated speed 280rmp

Specification

Pic							
Model	SM-100	SM-200	SM-300	SM-300	SM-400	SM-500	SM-600
Rated power	100w	200w	300w	300W	400W	500W	600W
Maximum power	130W	250W	380W	350W	480W	560W	680W
Rated voltage	12/24v	12/24v	12/24v	12/24V	12/24v/48v	12/24V/48v	12/24V/48v
Start-up wind speed	2.0m/s	2.0m/s	2.0m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s
Rated wind speed	10m/s	11.5m/s	11.5m/s	10m/s	10m/s	10m/s	10m/s
Survival wind speed	65m/s	65m/s	65m/s	65m/s	65m/s	55m/s	55m/s
Top net weight	6.6kg	6.7kg	9kg	10.5kg	12.0kg	15.2kg	14.5kg
Wheel diameter	1.2m	1.3m	1.35m	1.35m	1.55m	1.67m	1.75m
Number of blades	3/5					3	3
Blades material	Nylon fiber						
Generator	Three phase permanent magnet ac synchronous generator						
Magnet	NdFeB						
Generator case	Casting aluminum alloy						
Control system	Electromagnet/wind wheel yaw						
Speed regulation	Automatically adjust windward direction						
suggested tower height (m)	6 （3m*2)						
Package dimension	68*28*19 cm	68*28*19 cm	68*28*19 cm	93*40*22 cm	93*40*22 cm	93*37*26 cm	93*37*26 cm
Gross weight	8.5kg	9kg	9.5kg	12kg	12.5kg	17kg	17.5kg
Price(USD)	88	95	100	120	130	165	190

Project Cases- Lebanon

Specification

Solar Plant:550Wx6pcx 3 Rows;

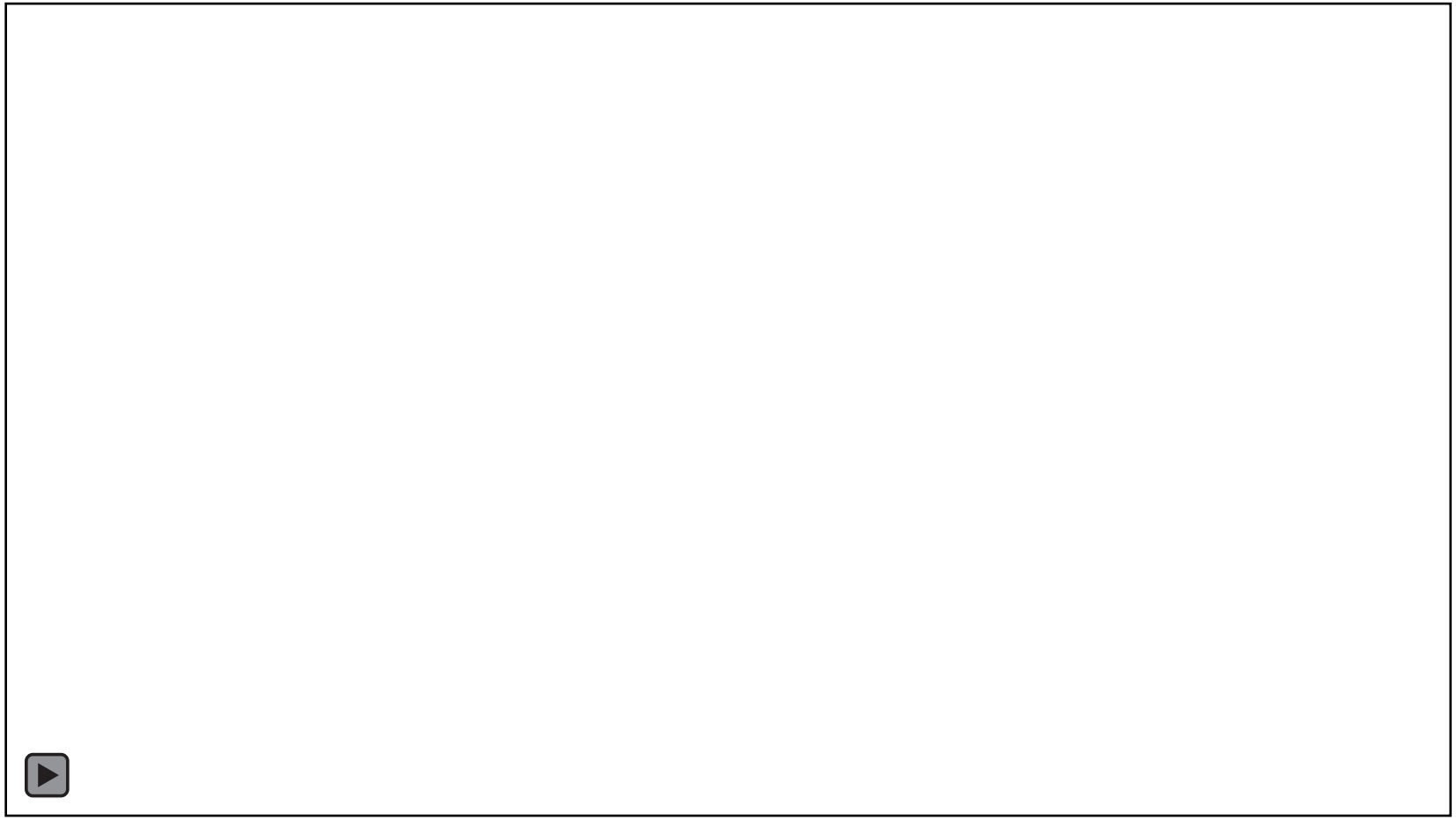
Wind Turbine: 5KW

LED Lamp: 50W

lithium battery: 36Ah;

Solar controller: MPPT 24V15A ;

Lamp Pole:6m



Project Cases- Malaysia

Specification

LED Lamp: 70W;

Solar Panel:75W x2pc;

lithium battery:40Ah;

Solar controller: MPPT 24V15A

Lamp Pole:9m





Project Cases- Chile

Specification

LED lamp: 56W/DC24V

Solar Panel: 100W/18V x 2pcs

Solar Controller: 24V/10A

Battery:12V/80Ah x 2pcs

Pole:8M

Wind generator: 300Wstart

wind speed 1m/s rated 35m/s







Project Cases- China

Specification

LED Lamp: 70W;

Solar Panel:75W x2pc;

lithium battery:40Ah;

Solar controller: MPPT 24V15A

Lamp Pole:9m





SUNMASTER

SunMaster Solar Co., Ltd

Tel:+86 139 6796 1680 WA:+86 139 6796 1680
Email: info@chinasunmaster.com www.chinasunmaster.com
No. 2819, Haitang East Road, Jinhua Zhejiang China

Europe Branch:

Tel: +39 02.37.92.02.88 WA:+393286488000
Email: export@chinasunmaster.com