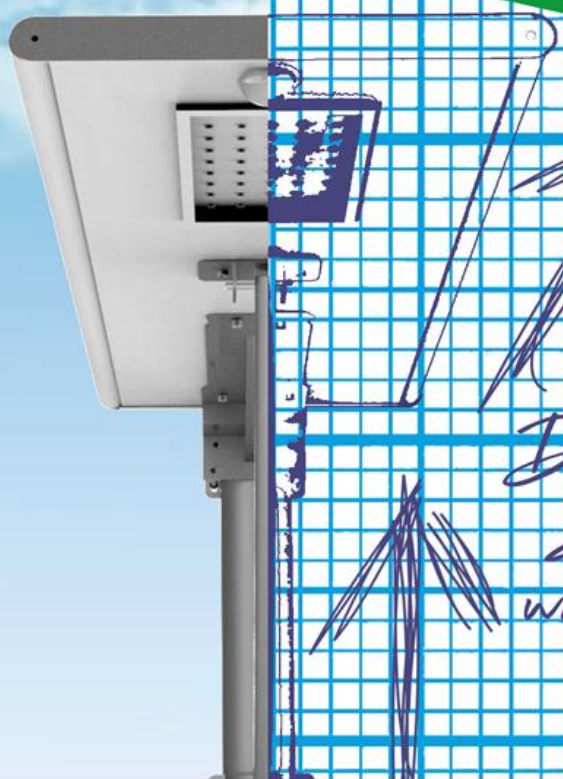




SUNMASTER



*led light 60W
Dimming mode 12h
Backup time 2 days
with 1 extra day*

**PROJECTS
CASE STUDIES
2017**

WHO WE ARE AND WHY YOU SHOULD LISTEN TO US

We are **Jinhua Sunmaster Lighting Co. Ltd**

In case you have never heard about us, here's why we are qualified to tell you about street lights.

- we have strong R&D department including physical, thermology, photology, mechanics, electronics
- we have cooperation with Semiconductor Institute of Beijing University and LED Research Center of Zhejiang University
- we have more than 10 years experience
- we have the ability to manufacture 100.000 solar light system per year
- we have our own workshop for LED lights, solar panels, steel structures.

Click on the video below to learn more about us



WHY WE DO NOT HAVE A PRICE LIST FOR SPLIT SOLAR STREET LIGHTS

Have you ever been at the supermarket and need to buy a fruit juice? I always feel lost. There are so many types and I do not know which one to choose. One day I went to a small discount and there was only 1. It was simple, but when I arrived home I tried it and it was not good. The taste was terrible and it was almost all water.

You can have the same problem with split solar street lights.

We are not a discount company which can give you few options among which you can easily choose.

We supply solar lighting solutions, studying carefully your needs for each project. The system will be designed and optimized to work at best with the optimal results.

Just to give you a rough idea

We have

- 20 different models of LED street lights
- in average 10 different power for each street lights
- 60 different types of solar panels
- 5 different types of controller
- in average about 50 different types of solar battery power with 2 different technology (LED and LiFePO4)
- batteries can be installed in 5 different ways
- poles can be different height (normally from 3 to 12 meters), that is 10 types if we do not consider when customer ask for example 5.5 meters height
- 20 different pole designs
- 5 wind turbine options

Just considering these main types we can manufacturer $20 \times 10 \times 60 \times 5 \times 50 \times 2 \times 5 \times 10 \times 20 \times 5$, that is 30.000.000.000 possibilities.

As you can imagine it is not easy to have a full price list.

To give you an idea herewith you can find some case studies.

The configuration and the price refer to that exact projects.

CASE STUDIES

MAURITIUS

SOLAR STREET LIGHT 80W

Case study for a project in Sudan for **35 solar lights systems**.

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Port Luis City	10 degrees 3.43 kWh/m2/day	12 hours working time 1h 70% + 3h 100% + 8h 50% dimming mode	1 day + 2 extra backup days	Top of the pole	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

For all these items at

965USD

EXW China

Components	Photo	Specification
1) LED Light		80W , USA Bridgelux LED chip Color:Cool white Defend grade:IP65 Lampshell: Aluminum Q'ty: 1pc
2) Solar panel		180W , poly silicon, Working life: >25years Q'ty: 2pc
3) Battery		150Ah/DC12V gel battery, sealed free maintainance Q'ty:2pc
4) Solar Controller		24V/15A , Light on/off automaticly; IP68 waterproof, over charge discharge protection, temperature compensation; Q'ty: 1pc
5) Pole		10m total height with the battery box under the solar panel bracket on the top of pole; Made of hot-dip galvanized steel Material Q235 Anti-rust,anticorrosion; Lower diameter 210mm upper diameter 90mm; Base perimeter 45cm x 45cm and a 2.5cm thickness Q'ty: 1set
6) Battery box		Material:Made of hot-dip galvanized steel Material Q235 , Anti-rust,anticorrosion; Q'ty: 1set
7) Foundation kit		4pcs of M24 anchor bolt
8) Cable,screw		Enough cable and screw and all the accessories

SAUDI ARABIA

SOLAR STREET LIGHT 112W

Case study for a project in Sudan for **370 solar lights systems**.
 In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Abqaiia City	40 degrees 5.80 kWh/m2/day	12 hours working time 4h 100% + 2h 60% + 6h 30% dimming mode	1 day + 2 extra backup days	No battery box	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification	Q'ty in unit Solar Light
LED Street Light-112W		112W, USA Bridgelux LED chip,130lm/W Color:Cool white Defend grade:IP65 Lampshell: Aluminum	1 pcs
Mono Solar panel 290W		290W Mono solar panel,A grade solar cell,high conversion efficiency,25 years at 85% of minimal rated output power.	1 pcs
Gel Battery130Ah		130Ah/12V,Gel type,free maintenance,deep cycle Life-span: >6 years	2 pcs
MPPT Controller 15A		MPPT 15A,12V/24V auto-sensing,light on+time intelligent control,high efficient and accurate charging control,IP68,various protections	1 pcs
Cable		International standard cable,used for solar powered lighting connection,complete set	1 pcs

For all these items at

577USD

EXW China

INDIA







SOLAR STREET LIGHT 120W

Case study for a project in Sudan for **150 solar lights systems**.

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Port Blair City	60 degrees 4.2 kWh/m2/day	12 hours working time 6h 100% + 6h 50% dimming mode	1 day + 1 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification
Led Lamp SLD08-120W		120W ,imported USA Bridgelux LED chip, efficiency> 160lm/w,life-span 100,000 hours, die-casting aluminum,IP65
Poly Solar panel 210W		210W poly solar panel,A grade solar cell,high conversion efficiency,25 years at 85% of minimal rated output power.
Gel Battery140Ah		140Ah/12V,Gel type, free maintenance,deep cycle Life-span: >6 years
Solar Controller 20A		20A,12V/24V auto-sensing,light on+time intelligent control,high efficient and accurate charging control,IP 68,various protections
Battery box 140Ah*2		PVC material,underground-buried type,waterproof IP65,with PVC tube for battery cable
Cable		International standard cable,used for solar powered lighting connection,complete set

For all these items at

664USD

FOB Ningbo

BAHRAIN









SOLAR STREET LIGHT 80W

Case study for a project in Sudan for **300 solar lights systems**.

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Bahrain country	60 degrees 5.6 kWh/m2/day	13 hours working time full power 100%	1 day + 2 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification	Q'ty in unit Solar Light
Led Lamp SLD08-80W		80W,imported USA Bridgelux LED chip, efficiency >160lm/w, life-span 100,000 hours, die-casting aluminum,IP65	1 pcs
Poly Solar panel 180W		180W poly solar panel,A grade solar cell,high conversion efficiency,25 years at 85% of minimal rated output power.	2 pcs
Gel Battery 250Ah		240Ah/12V,Gel type,free maintenance,deep cycle Life-span: >6 years	2 pcs
MPPT Controller 15A		MPPT 15A,12V/24V auto-sensing ,light on+time intelligent control,high efficient and accurate charging control,IP68,various protections	1 pcs
Battery box 250Ah*2		PVC material,underground-buried type,waterproof IP65,with PVC tube for battery cable	1 pcs
Cable		International standard cable,used for solar powered lighting connection,complete set	1 pcs
Lamp arm 120cm		Material Q235 steel,high wind resistance,anti-rust, hot-dip galvanized and spray plastic powder coated, life-span>20 years, optional color available	1 pcs
Solar fixing bracket 2x180w		Material Q235 steel,high wind resistance,anti-rust, hot-dip galvanized and spray plastic powder coated, 360 degree adjustable angle ,life-span>20years	1 kit

For all these items at

860USD

FOB Ningbo









ARGENTINA

SOLAR STREET LIGHT 20W

Case study for a project in Sudan for **200 solar lights systems**.
 In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Buenos Aires City	35 degrees 3.90 kWh/m2/day	10 hours working time 5h 100% + 5h 50% dimming mode	1 day + 2 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Component	Photo	Specifications	Qty in unit Solar Light
LED Street Light-20W		20W, USA Bridgelux LED chip,130lm/W Color:Cool white Defend grade IP65 Lampshell: Aluminum	1 pcs
Poly Solar panel 90W		90W poly solar panel,A grade solar cell,high conversion efficiency,25 years at 85% of minimal rated output power.	1 pcs
Gel Battery 50Ah		50Ah,12V,Gel type,free maintenance,deep cycle Life-span: >6 years	1 pcs
Solar Controller 5A		5A,12V,light on-time intelligent control,high efficient and accurate charging control,IP68,various protections	1 pcs
5m Pole		5m height,Q235 steel,high wind resistance,anti-rust, hot-dip galvanized and spray plastic powder coated, with fixing bracket and lamp arm,life-span>20years	1 set
Foundation kits M16-500		4pcs M16-500 anchor bolt in "J" shape design, with "+" shape fixing parts,gaskets and nuts	1 pcs
Battery box 50AH*1		PVC material,underground-buried type,waterproof IP65,with PVC tube for battery cable	1 pcs
Cable		International standard cable,used for solar powered lighting connection,complete set	1 pcs

For all these items at
263USD
 EXW China

JORDAN




SOLAR STREET LIGHT 65W

Case study for a project in Sudan for **480 solar lights systems**.

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Back-up time	Battery potion	Type of battery
Amman City	40 degrees 4.97 kWh/m2/day	12 hours working time Full power 100%	1 day + 2 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification	Qty in unit Solar Light
Led Lamp SLD15-65W		65W, imported USA Bridgelux LED chip, efficiency >180lm/w, life-span 100,000 hours, die-casting aluminum, IP65	1 pcs
Poly Solar panel 120W		120W poly solar panel, A grade solar cell, high conversion efficiency, 25 years at 85% of minimal rated output power.	2 pcs
Gel Battery 80Ah		80Ah/12V, Gel type, free maintenance, deep cycle Life-span: >6 years	2 pcs
Solar Controller 10A		10A, 12V/24V auto-sensing, light on+time intelligent control, high efficient and accurate charging control, IP68, various protections	1 pcs
Battery box 80AH*2		PVC material underground-buried type, waterproof IP65, with PVC tube for battery cable	1 pcs
Cable		International standard cable, used for solar powered lighting connection, complete set	1 pcs

For all these items at

375USD

EXW China

TRINIDAD AND TOBAGO SOLAR WIND STREET LIGHT 60W

Case study for a project in Sudan for **10 solar lights systems**.

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Port of Spain City	10 degrees 5.00 kWh/m2/day	12 hours working time 4h 100% + 2h 60% + 6h 30%	3 day + 2 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification
1) LED Light		60W, USA Bridgelux LED chip, Lumen: >130lm/w; Color:Cool white Defend grade:IP65 Lampshell: Aluminum Q'ty: 1pc
2) Solar panel		100W, poly silicon, Working life: >25years Q'ty: 2pcs
3) Battery		150Ah/DC12V Gel battery, sealed free maintainance Q'ty:2pcs
4) Solar Controller		24V15A, Light on/off automaticly IP68 waterproof,over charge discharge protection ,temperature compensation Q'ty: 1pc (Hybrid)
5) Pole		7m total height with solar panel bracket made of hot-dip galvanized steel Material Q235 Anti-rust,anticorrosion; Q'ty: 1set
6) Battery box		Material:Plastic,fully sealed waterproof
7)Foundation kit		4pcs of M20 anchor bolt
8) Cable,screw		Enough cable and screw and all the accessories
9) Wind tubine		300W rated power. 24V (Controller included)

For all these
items at

860USD

EXW China

NIGERIA









SOLAR STREET LIGHT 50W

Case study for a project in Sudan for **50 solar lights systems**.

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Aba City	15 degrees 3.60 kWh/m2/day	12 hours working time 5h 100% + 1h 50% + 6h 50%	1 day + 2 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification	Q'ty in unit Solar Light
Led Lamp SLD08-50W		50W, imported USA Bridgelux LED chip, efficiency >160lm/w, life-span 100,000 hours, die-casting aluminum, IP65	1 pcs
Poly Solar panel 230W		230W poly solar panel, A grade solar cell, high conversion efficiency, 25 years at 85% of minimal rated output power.	1 pcs
Gel Battery 100Ah		100Ah/12V, Gel type, free maintenance, deep cycle Life-span: >6 years	2 pcs
Solar Controller 10A		10A, 12V/24V auto-sensing, light on+time intelligent control, high efficient and accurate charging control, IP68, various protections	1 pcs
8m Pole		8m height, Q235 steel, high wind resistance, anti-rust, hot-dip galvanized and spray plastic powder coated, with fixing bracket and lamp arm, life-span >20 years	1 set
Battery box 100AH*2		PVC material, underground-buried type, waterproof IP65, with PVC tube for battery cable	1 pcs
Cable		International standard cable, used for solar powered lighting connection, complete set	1 pcs
Foundation kits M20-800		4pcs M20-800 anchor bolt in "J" shape design, with "+" shape fixing parts, gaskets and nuts	1 pcs

For all these items at

674USD

EXW China

COLOMBIA










SOLAR WIND STREET LIGHT 30W

Case study for a project in Sudan for **50 solar lights systems.**

In the configuration of the system we have considered:

Solar irradiation	Angle of the Solar Panel	Working time and dimming mode	Backup time	Battery potion	Type of battery
Acacías City	1 degree 3.86 kWh/m2/day	12 hours working time Full power 100%	1 day + 2 extra backup days	Battery underground	AGM Lead Gel Battery

Following our calculation the best solution for this type of paraments is:

Components	Photo	Specification	Qty in unit Solar Light
wind turbine		Rated Voltage(DCV):12/24 Max output(w):200 Start-up wind speed(M/S):1.5m/s Survial wind speed(M/S):45 Lifetime(years):15-20	1 pcs
Led Lamp BLD02-30W		30W imported USA Bridgelux LED chip, efficiency >160lm/w,life-span 100,000 hours, anodized aluminum,IP65	1 pcs
Poly Solar panel 50W		50W poly solar panel,A grade solar cell,high conversion efficiency,25 years at 85% of minimal rated output power.	2 pcs
Gel Battery100Ah		100AH/12V,Gel type,free maintenance,deep cycle Life-span: >6 years	1 pcs
Wind Solar hybrid Controller		12V/24V light on-time intelligent control,high efficient and accurate charging control,IP65,various protections	1 pcs
5m Pole		5m height,Q235 steel,high wind resistance,anti-rust, hot-dip galvanized and spray plastic powder coated, with fixing bracket and lamp arm,life-span>20years	1 set
Foundation kits M16-500		4pcs M16-500 anchor bolt in "J" shape design, with "+" shape fixing parts,gaskets and nuts	1 pcs
Battery box 100Ah*1		Metal material,installation on the pole, heat-dissipative and locked-door design, galvanized anti-corrosion,life-span >20 years	1 pcs
Cable		International standard cable,used for solar powered lighting connection,complete set	1 pcs

For all these items at

571USD

EXW China

INFO NEEDED TO DESIGN THE PERFECT SOLAR STREET LIGHT

The prices of the case studies are just for your reference.

You can easily understand that

- different cities have different sunshine
- different lighting time needs different solar panel size & battery size
- different street width needs different light power
- an overestimated configuration will give rise to excessively high prices
- an underestimated configuration will give rise to lack of illumination.

Since we are manufacturer of solar light systems, we can configure and manufacture them according to any your local requirements (solar irradiation, backup time, switch on light time)

Filling the following form will help us to design the correct system and to make a tailored offer that fit all your needs.

The more data you can give to us, the more accurate solution we can offer to you.

Sorry for asking you so many questions but it is really important for us to give the correct solution to you in order to avoid any misunderstandings and future problems.

Applicant information

Name and surname: _____

Email: _____

Phone: _____

Address: _____

State: _____

A) If you already know the configuration fill this part

How many solar panels you need and which wattage? _____

How is the pole height and/or how is the led light height? _____

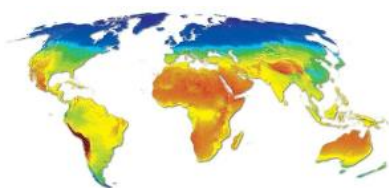
Which LED power do you need? _____

How many batteries you need, which voltage and which type (lead acid, Li-ion)? _____

How many solar street lights do you need? _____

B) If we need to configure the perfect solar lighting system for you fill this part.

Please give us as much possible information you have. The more information we get the best accurate will be the configuration.

Location

Different locations have a different level of sunshine. If you tell us the location where the solar LED systems should be installed we can estimate the irradiation and therefore calculate the solar panel size.

In which city do you make the installation? _____

Application (driveway, pathway, highway, perimeter, parking): _____

Pole .



Do you already have the pole? _____

In the positive case please send us pictures _____

Otherwise, do have any requirement for pole height? _____

Please specify if the height refers to the pole or to the light _____

Do you need a single arm or a double arm pole? _____

Lamp power (type of road, lux).

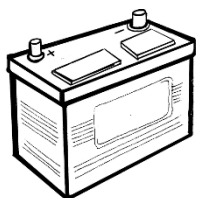


We need them to calculate the pole height and lamp power accordingly. Do you know the type of road (highway, main road, village road)? _____

Do you have any minimum lux requirement? _____

Batteries (backup time).

In order to calculate the battery capacity, we need to know



How many hours will the light be on each night? _____

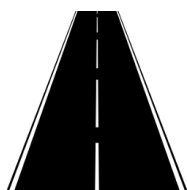
How long do you need maximum power light at 100%? _____

How many hours/day you need power save mode (example 6 hours full power, 6 hours 50% power every day)? _____

Not every day will be sun shining, how many rainy or cloudy days need to back up? _____

Where do you want batteries to be installed (on top of the pole, hanging on the pole, at the base of the pole, underground)? _____

Road information



Do you have the road picture or road layout? _____

How wide is the road? _____

How long distance between poles? _____

How much lumen is required? _____

Quantity

How many solar street lights do you need? _____

Other notes



SUNMASTER

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