

# K1 SERIES

# PORTABLE SOLAR POWER SYSTEM



## COMPANY INFORMATION

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## PRODUCT OVERVIEW

The new portable solar power bank with a handbag-style design is a great choice as it offers convenience and aesthetics. It's a portable device that utilizes solar panels to convert sunlight into electrical energy, which designed to store this energy in a built-in battery. The compact and portable nature of the handbag design makes it easy to carry around, allowing users to charge their devices such as smartphones, tablets, cameras, and other USB-compatible devices.

The simplicity and attractiveness of the design make it appealing to a wide range of users. Whether it's professionals, students, travelers, or outdoor enthusiasts, the handbag-style design adds a touch of style while serving its practical purpose.



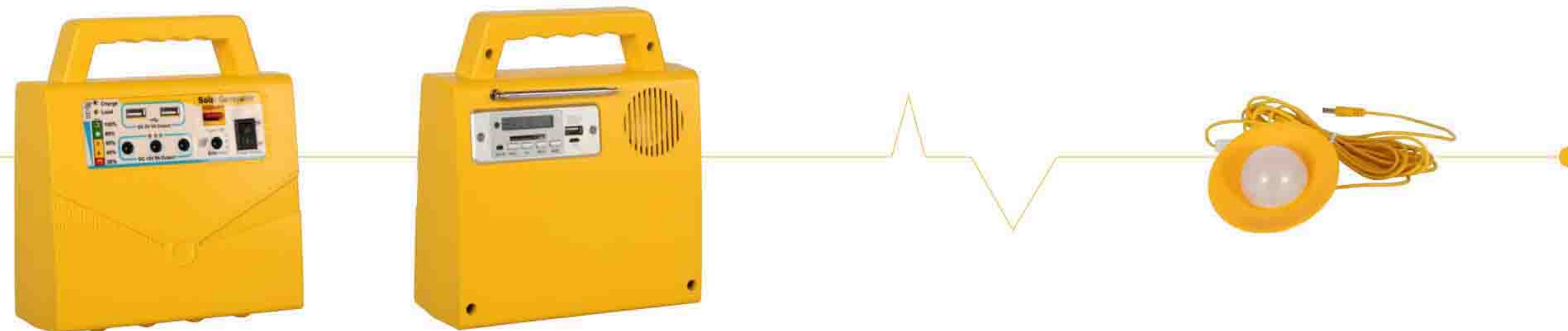


## PRODUCT ADVANTAGES

### Why we used portable solar power banks:

#### 01. Renewable Energy

It utilize sunlight to generate electricity, making them a renewable energy source. By harnessing solar power instead of relying on traditional grid electricity or fossil fuel-based generators, solar power banks reduce reliance on non-renewable energy sources and contribute to environmental sustainability by reducing pollution and combating climate change.



#### 02. Independence

It's operate independently, without the need for external power sources. In outdoor activities, camping, hiking, or during emergencies, they provide a self-sufficient power solution. By simply placing the solar power bank in sunlight, it can charge and provide power to mobile devices without relying on the grid or electrical outlets.



#### 03. Portability

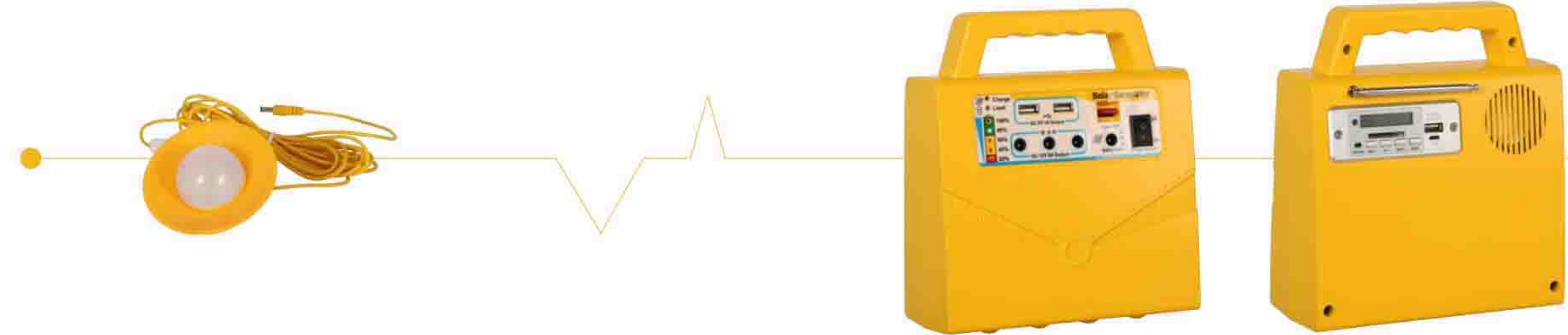
It's designed to be lightweight and compact, making them highly portable. Their portable nature makes them ideal for outdoor activities, travel, or camping. Users can easily carry them in backpacks or handbags, allowing for convenient charging of mobile devices on the go.





## PRODUCT ADVANTAGES

### Why we used portable solar power banks:



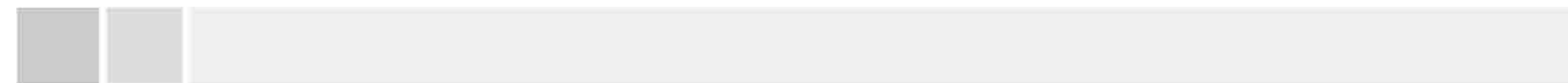
#### 04. Versatility

It's typically feature multiple charging interfaces, allowing them to accommodate various devices such as smartphones, tablets, digital cameras, GPS navigators, and more. Some models may also include additional features such as LED lighting, USB ports, or DC output, providing additional charging and usage options.



#### 05. Environmentally Friendly and Sustainable:

It's eco-friendly and promote sustainability. By utilizing renewable solar energy, they contribute to reducing carbon emissions and minimizing the environmental impact associated with traditional energy generation methods. Solar power banks help individuals adopt cleaner and greener energy solutions.





PRODUCT PANEL FUNCTION INTRODUCTION



Function Description							
1	Charge indication	6	Power fuse	11	SD card slot	16	Micro socket
2	Load indication	7	Power switch	12	OFF/ON switch	17	Mode switch
3	Capacity	8	Solar panel input	13	Previous/V-	18	Next/V +
4	DC 12V output	9	Aerial	14	USB socket	19	Play/Pause
5	USB interface	10	LED digital display	15	Horn		



## BATTERY SPECIFICATION



DesignLife	6-8 years
Nominal Voltage	12V
Nominal Capacity	7AH
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operation Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max.Discharge Current 77°F(25°C)	100A(5s)
Short Circuit Current	50A

## BATTERY GUARANTEE OF QUALITY

### Battery Cells

High-end battery cells keep every cell's voltage, resistance, capacity, discharging always in sync.

### Battery Protector

High precision IC keep performance more stable protect over load, over charge, over discharge, short circuit, over voltage, over current keep battery pack always safe and long life span.

### Precision Welding Machine

Fully automatic precision welding machine can ensure that every battery can be welded firmly to prevent the danger of short circuit or power failure.

### Aging Test Machine

every battery pack need to thorough charging and discharging test by the aging test machine to keep 100% qualified.





SOLAR PANEL SPECIFICATION



Specifications

Peak Power(Pmax)	20
Maximum Power Voltage(Vmp)	18
Maximum Power Current(Imp)	1.11
Open Circuit Voltage(Voc)	22.13
Short Circuit Current(Isc)	1.27
Cells Efficiency( % )	18.37
Module Efficiency( % )	17.21
Power Tolerance	0~+3%
Pmax Temperature Coefficients(W/°C)	-0.400%
Voc Temperature Coefficients(V/°C)	-0.300%
Isc Temperature Coefficients(A/°C)	+0.060%
NOCT Nominal Operating Cell Temperature(°C)	45±2
Operating and Storage Temperature(°C)	-40~+85
Standard Test Condition(STC)	1.000W/m²;AM 1.5;25+/-2°C

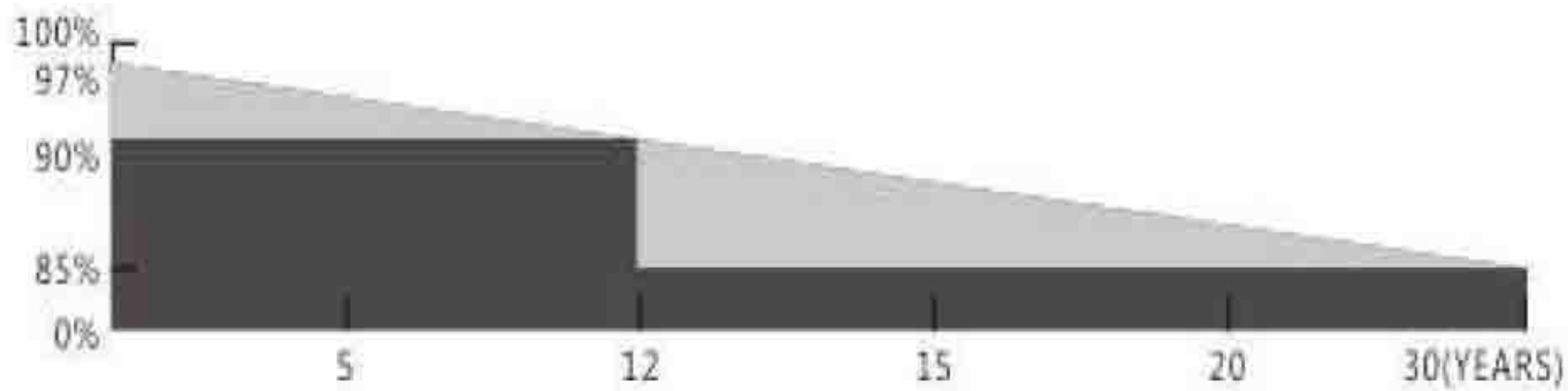
Mechanical characteristrtics

Dimensions	341*340*18mm
Frame	Anodized Aluminium Alloy
Junction box	IP65 Rated

Product Standard

Product Performance	IEC61215
Product Safety	IEC61730

Linear Performance Warranty



12  
YEARS

Guarantee on product materail and workmanship

30  
YEARS

Linear Power output warranty

Key Features



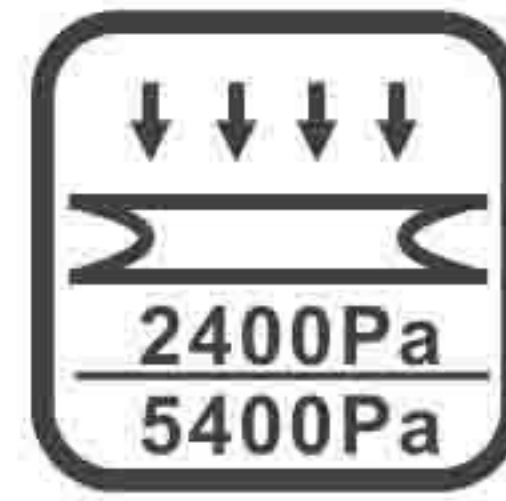
5 Busbar Cell:  
5 Busbar Solar cell adpots new technology to improve the efficiency of modules,offers a better aesthetic apperance making it perfect for rooftop installation and application



High Efficiency  
High Module conversion efficiency, through innovative manufacturing technology



Low-LightPerformance  
Advanced glass and solar cell surface texturing allow for excellent performance in low-light environments



Serve Weather Resilience  
Certified to withstand: wind load(2400Pa) and snow load (5400Pa)



Durability against extreme enviromental conditions  
High salt mist and ammonia resistance certified by TUV



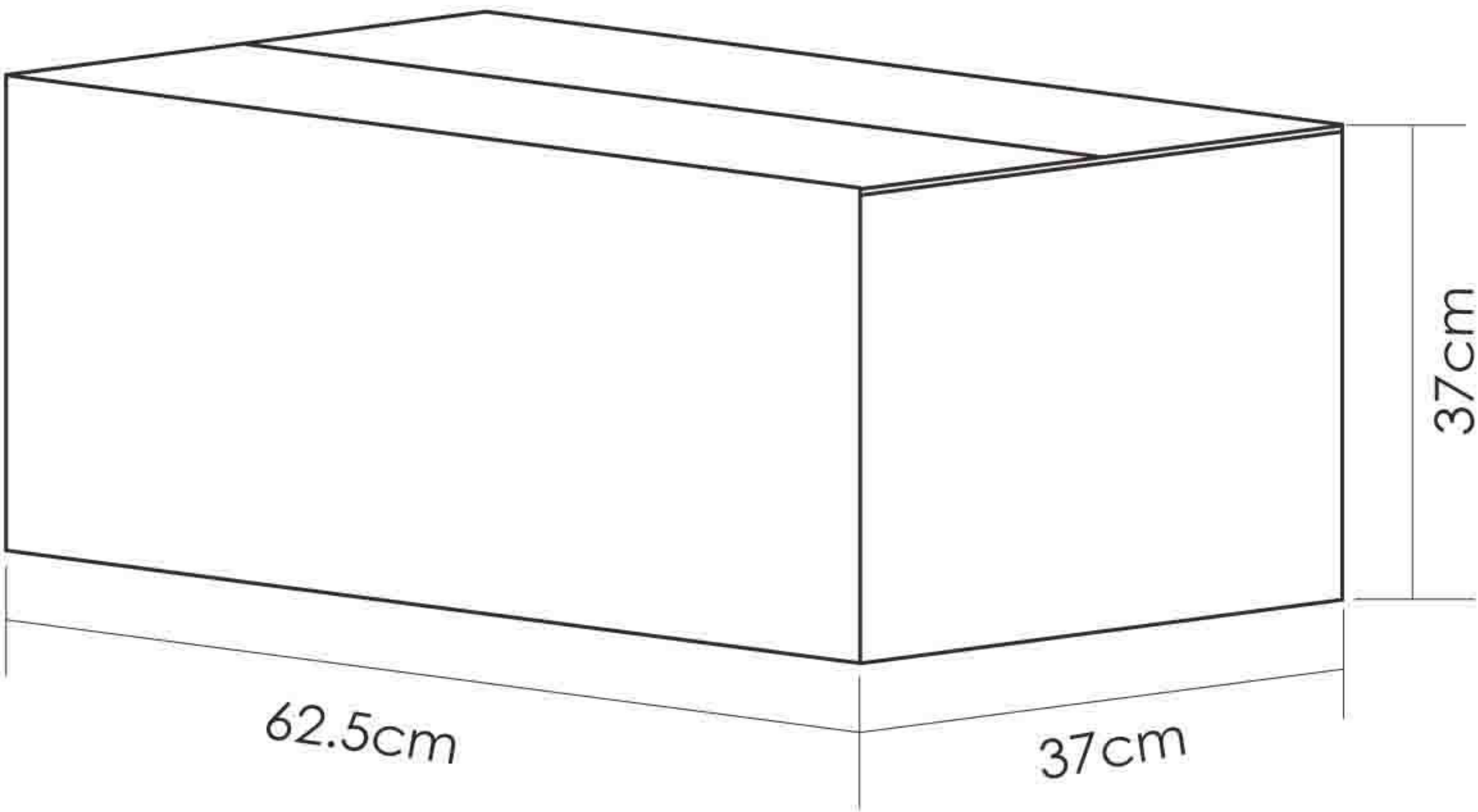
0-+5W Positive Tolerance  
Detailed information in Electrical Specifications





PRODUCT SPECIFICATION

Model	QKAT0464-SPS2007
LED Bulb	5W bulb 3pcs,with 5m cable,6000K
Solar Panel	18V 20W, Polycrystalline
Battery Type	Lead-acid battery 12V 7AH
Charging Time	6-8 hours
Discharging Time	10-24 hours
LED	160 lm/w
Radio	Support FM radio function/U disk/SD card
Material	ABS
System Host Size	180*80*204mm
Solar Panel Size	341*340*18mm
Warranty	3 Years



PACKAGING SPECIFICATION

P/N	Power	Packing Size(CM)			PCS/CTN	CBM/CTN
		L	W	H		
0464A20-01	20W	62.00	37.00	37.00	5	0.0856

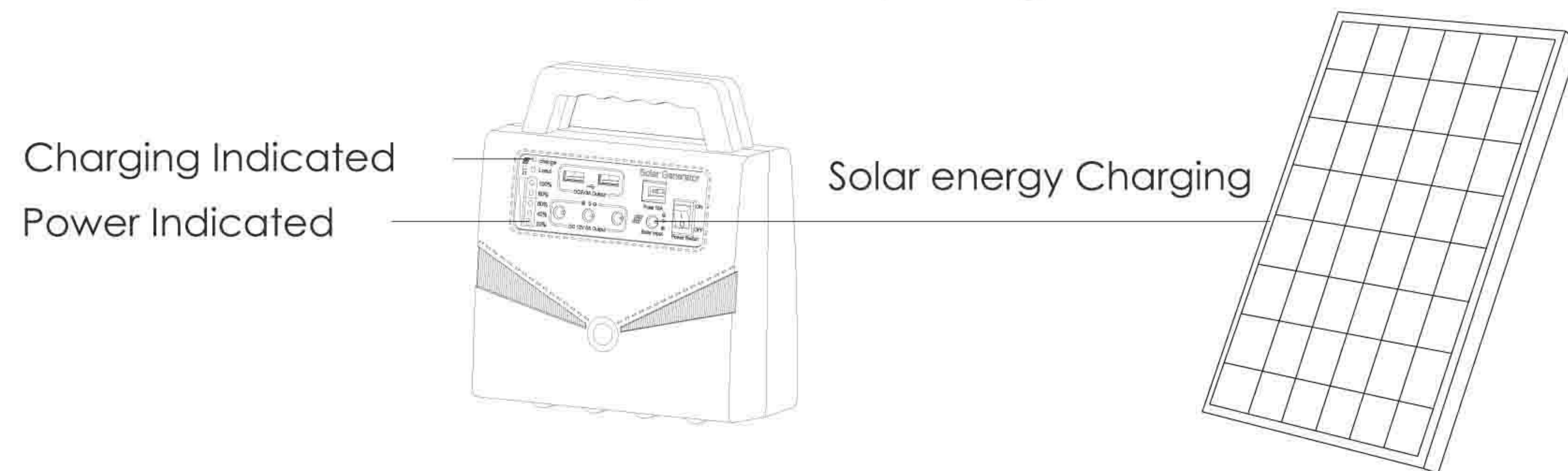


## INSTRUCTIONS FOR USE

Please turn on the system switch while using the system.  
 Green LED indicator on: System working  
 The red 20% battery indicator flashes: the battery is low and needs to be charged in time.  
 Green LED blinking: Over load protection, need to remove all loads expect system configuration load

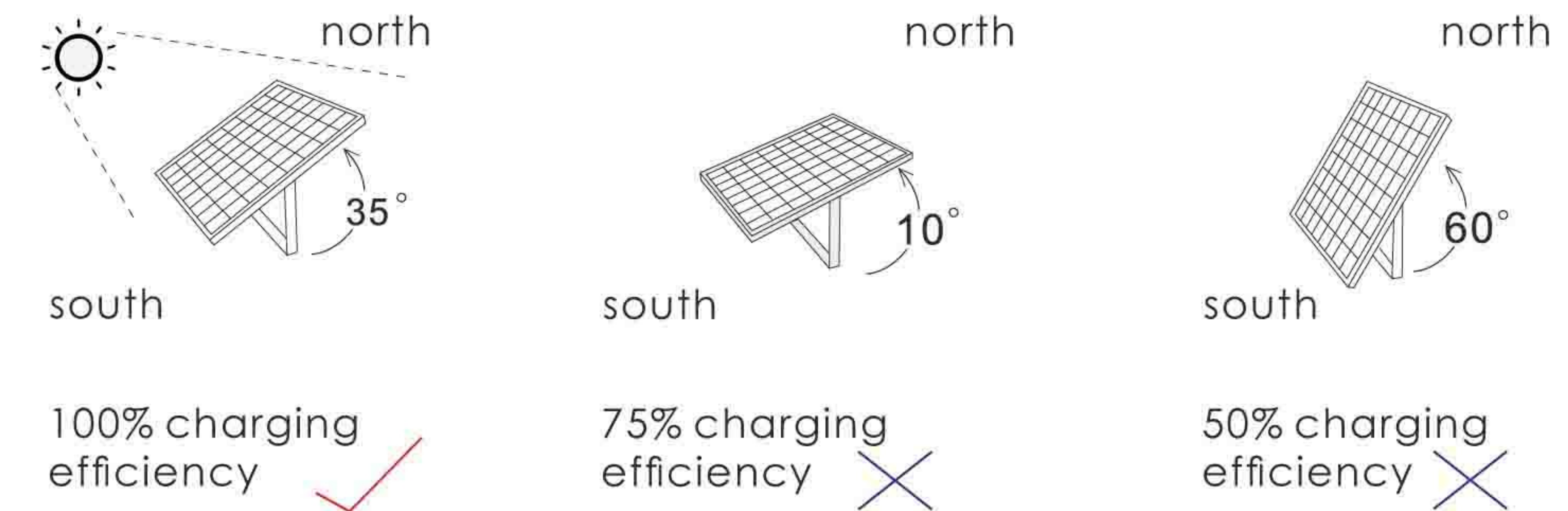
## INTRODUCTION TO CHARGING

Charging by solar panel  
 The solar panel will be placed toward to the sun, then plug the wire of solar panel to the charge port.  
 Please make sure the battery will be fully charged before its first use



**Charging status:**  
 Red lights --- charging  
 The red 100% battery indicator is solid --- fully charged

Note: Please make sure that the solar panel is installed at the correct angle and that there are no obstructions blocking the solar panel.  
 For example: solar panels are installed at latitude 30. The optimal tilt angle of the solar panel is then 35° as shown in the figure below.



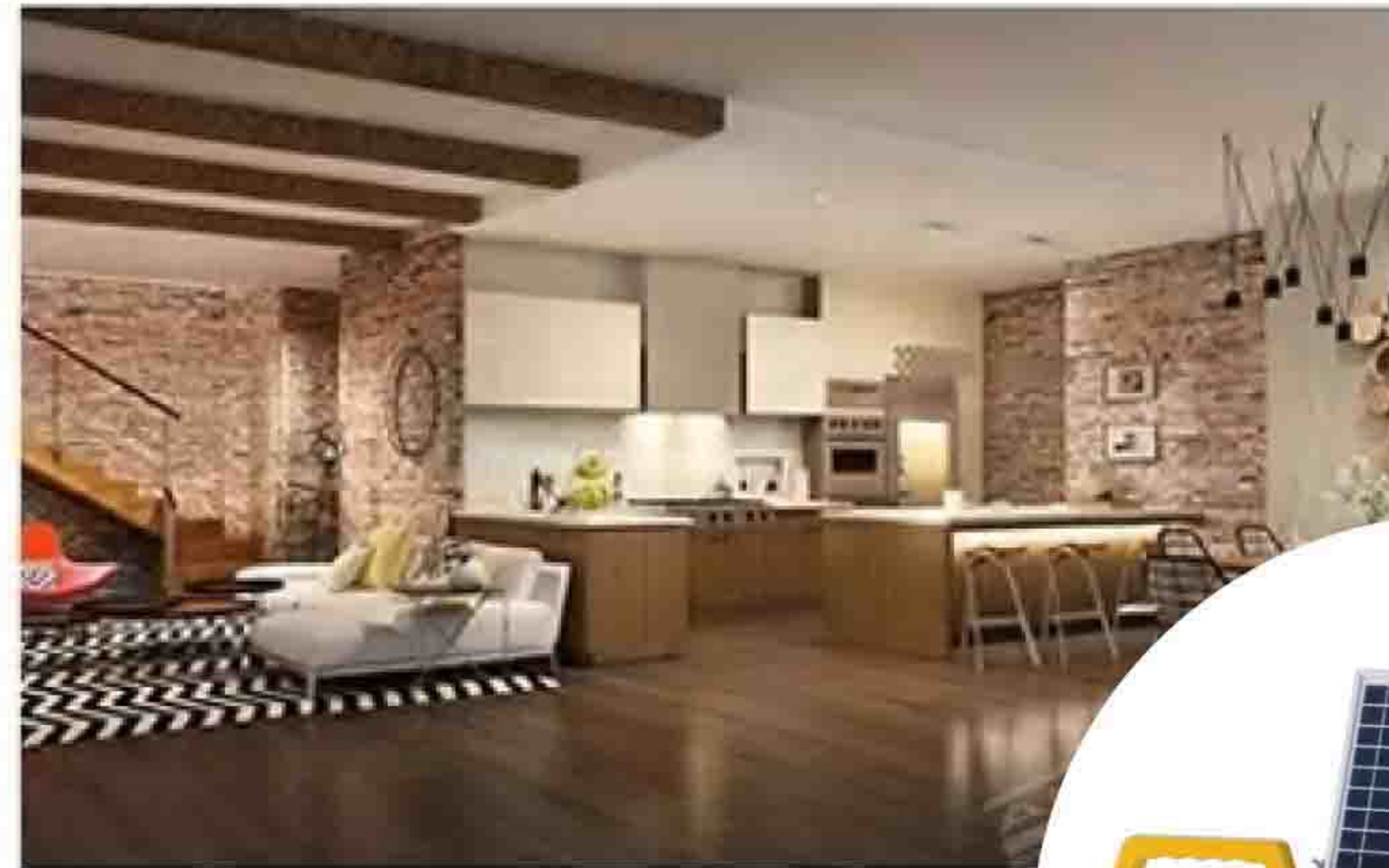
## WARNING

- When it's charging, please do not expose the solar system host to sunlight. The system must be kept in a dry and cool place.
- The solar system must be fully charged at least once a month.
- Solar panels should always keep the surface clean and functional. Should be kept away from fire and corrosive environment,
- It is forbidden to throw and tap. Any unauthorized removal or modification is not covered by warranty repairs.



## APPLICATION

# APPLICATION



Home Lighting



Camping Lighting



Work Lighting



Emergency Lighting