

## Detailed Spec of Solar Nighthawk Light



Patent product



RoHS



IP65

### Advantage:

- Wireless application-Integrated solar panel, LED, lithium battery, micro-controller and other accessories into one system, simple and stylish.
- Micro-computer controlled-Combine light control system and time control system perfectly, ensure whole system more energy-efficient.

Easy installation-No power required, no cables required, easy installation in 5 minutes.

- Solar panel angle adjustable-Adjustable in vertical and horizontal direction, ensure maximum efficiency of solar energy conversion.
- Good heat dissipation-Solar panel, battery and light body do not connect directly, they will not conduct heat to each other, to support good heat dissipation and long lifetime.
- Extreme light-Light efficiency reach 160lm/w, at same illumination, lower watt available.

Lithium battery-Adopt lithium battery to replace traditional gel battery, longer lifetime.

- Modular design-All components are modular design and in standardized production. Battery can be easily replaced if needed.
- Low cost-Compared with traditional solar led lights, much lower cost, easy to transport.

## Feature:

- Beautiful and modern appearance, simple and fashionable.  
Use of solar green energy, environment friendly, saving more.
- Low voltage driving, meet the Europe standard of CE RoHS FCC.  
No Hg, Pb or other hazardous materials, no radiation, human safety .
- IP65 grade, TVS lightning protection.  
Long lifetime of whole lamp, low maintenance costs.

## Details:

### Monocrystalline



18% photoelectric conversion efficiency

- Tempered glass cover
- 20-25 years lifetime

### High lumen led chip



45mil led chip, 160lm/w

- 50000hrs lifetime
- 70Ra CRI

### Socreat Smart Controller



Socreat unique design

- Combine light control and time control perfectly, ensure whole system more energy efficient
- Smart control, saving more and system works stably

### LiFePO4 Battery



High capacity

- No pollution and stable
- 5-8 years lifetime, 2000 times charge & discharge

High temperature resistance

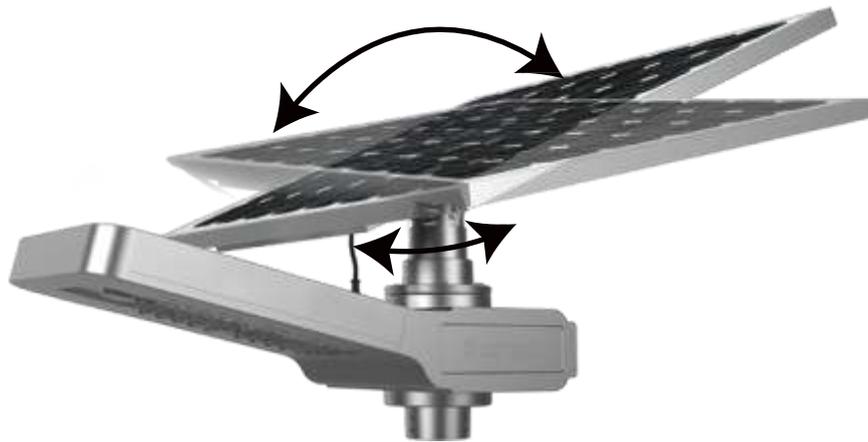
### High quality body



Socreat patent design

- Aluminum alloy, solid and firm
- Zinc plated, anti-rust corrosion
- Variety of installation methods

Solar panel angle adjustable schematic diagram:



Parameters:

Type	SC-NH50	SC-NH65	SC-NH80	SC-NH100
Lamp power	15W	20W	30W	40W
Solar panel	50W/18V	65W/18V	80W/18V	100W/18V
Lithium battery	170WH/12.8V	212WH/12.8V	340WH/12.8V	424WH/12.8V
LED qty	40pcs	40pcs	60pcs	60pcs
Luminous flux	1800-2100lm	2500-2800lm	3600-4200lm	5000-5600lm
Charge time(full sunlight)	5.5hrs	5.5hrs	7hrs	7hrs
LED chip Color	Bridgelux			
temperature CRI	3000-6500K			
Light control voltage	≥70Ra			
Light distribution	5V			
Lighting time Sensor	Bat wing with polarized light			
distance Sensor time	2-3 days			
Working temperature	5-10m			/
Lifetime Material	20-30s			/
Pole top diameter	-20 °C ~+60 °C			
Mounting height	≥50000hours			
Installation spacing	High quality aluminum alloy, die-cast aluminum			
	70mm			
	5-10meters			
	10-30meters			

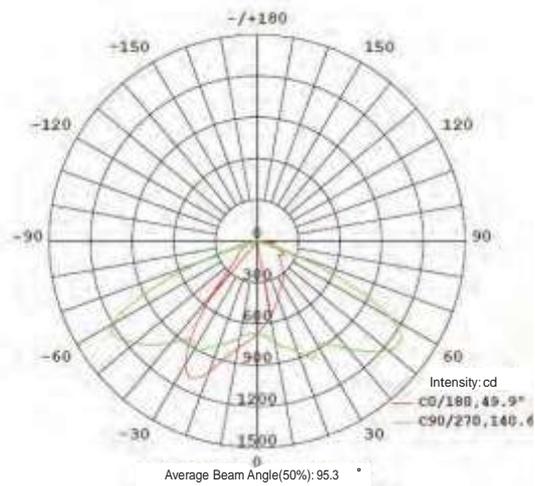
The data of its working time was measured at latitude 22 °, 113 ° east longitude in sunny days.  
The working time will be affected by the surroundings.

## Applications:

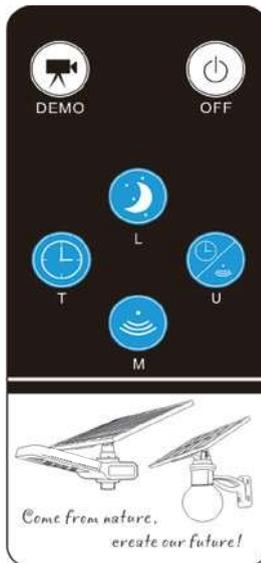
Widely used in Rural road, Courtyard, Villa, Park, Square, Farm, School, Factory, Slow lane etc...the places where need outdoor lighting and with enough sunshine.



## Luminous intensity distribution curves:



## Working mode



 **DEMO:** No matter day or night, light "on" for 1 minute. Only for test use.

 **OFF:** Light "off", no matter day or night.

 **L:** At night, 100%-1hr, 70%-3hrs, 20%-dawn.

 **T:** At night, 100%-5hrs, 50%-7hrs(dawn)

 **M:** At night, 50%-1hr, 100%-3hrs, 20%-dawn.

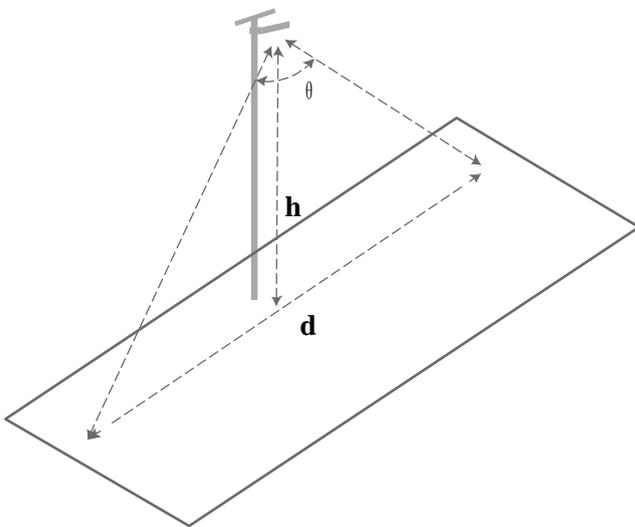
 **U:** At night, 100%-2hrs, 60%-2hrs, then sensor working, 60% if people come, 20% stand-by.

**Remark:** Default is L mode, can choose best mode according to different sunshine condition.

### Note:

1. The three LED indicator lights will twinkle if modes changing successfully, and above modes only be used for SC-NH50, SC-NH65 and SC-NH80.
2. Once a certain mode was set successfully, it will be reserved until you change other modes with remote control.

## Attentions of motion sensor function



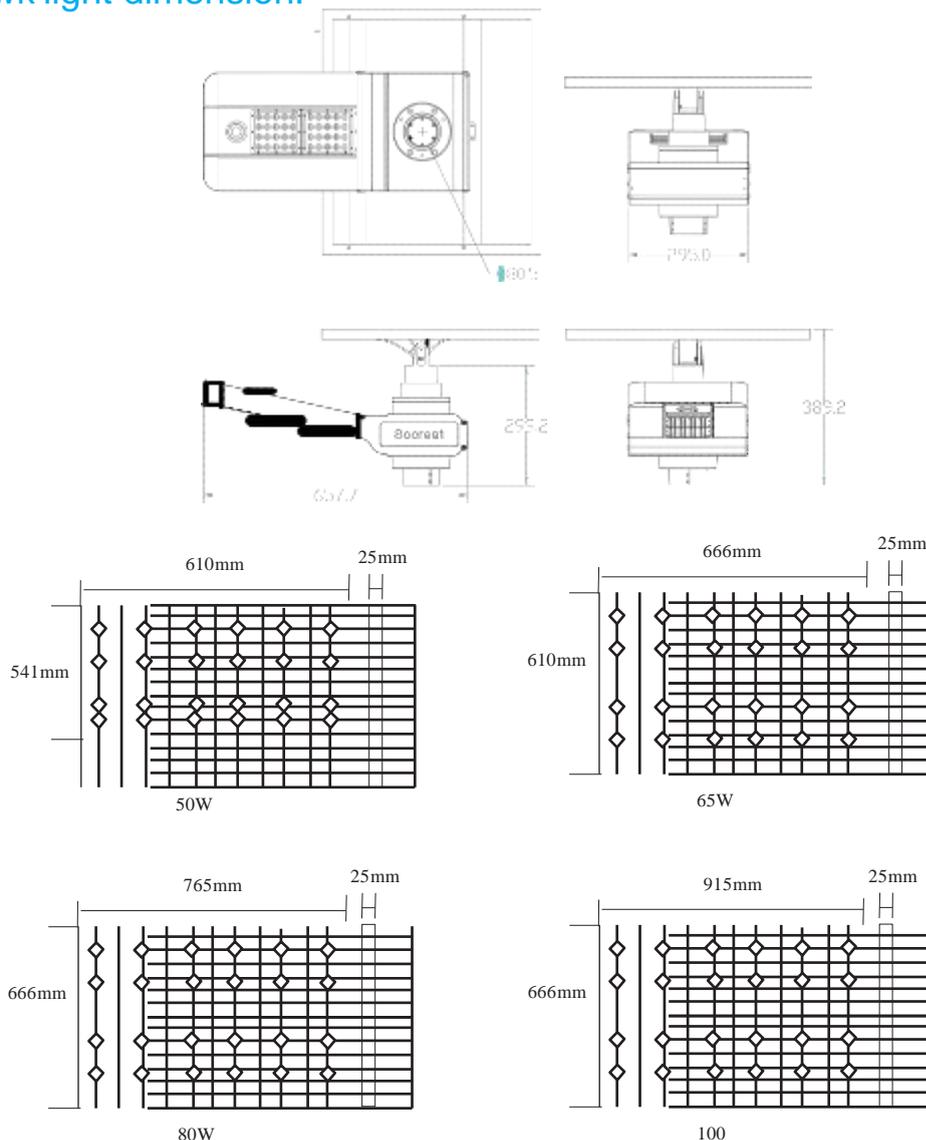
$\theta$ (Angle)	<b>h</b> (Height)	<b>d</b> (width)
$65^\circ$	6m	10m

1. Sensor area tested from a person at the average height of 1.6~1.7m, walking speed for 1.0~1.5 m per second. If testing standard different, sensor area will be different.
2. Sensor functions are greatly influenced by metal environment, so pls install it far away metal block.
3. Sensor against the metal block in front of it.
4. Sensor can get through glasses, wood board, plasterboard and other non-metallic object.
5. Sensor should be installed under 6m height.

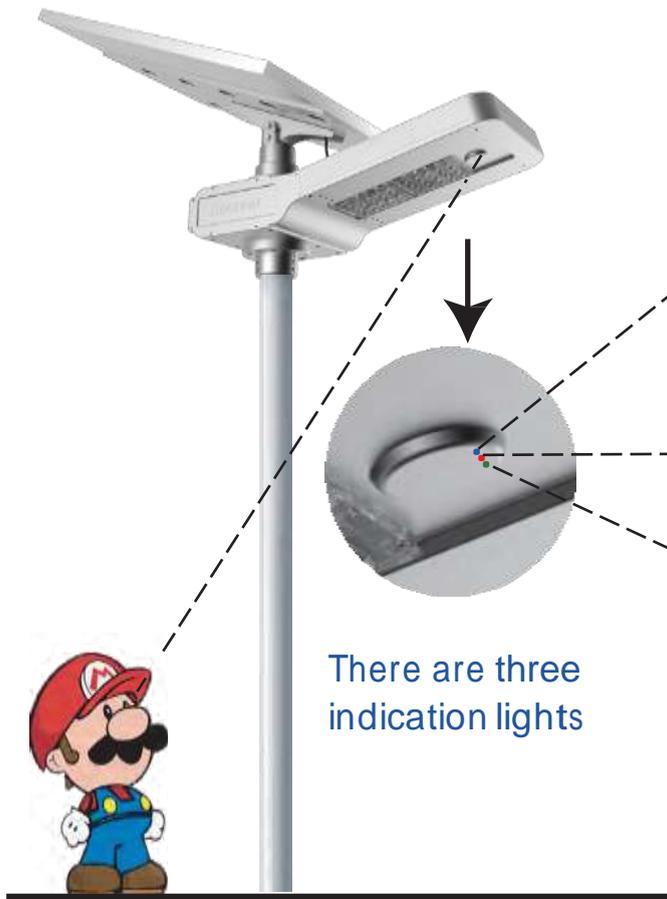
## Using Instructions:

- Solar Nighthawk 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  $0^{\circ}\text{C}$  to  $55^{\circ}\text{C}$ , the discharging temperature is  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ , make sure that ambient temperature is in this range when used, avoid damage to lithium battery.
- Please cleaning surface of solar panels regular, such as dirt, leaves, oil, etc., ensure high photoelectric conversion efficiency.
- Cleaning snow of solar panel surface timely in winter.

## Nighthawk light dimension:

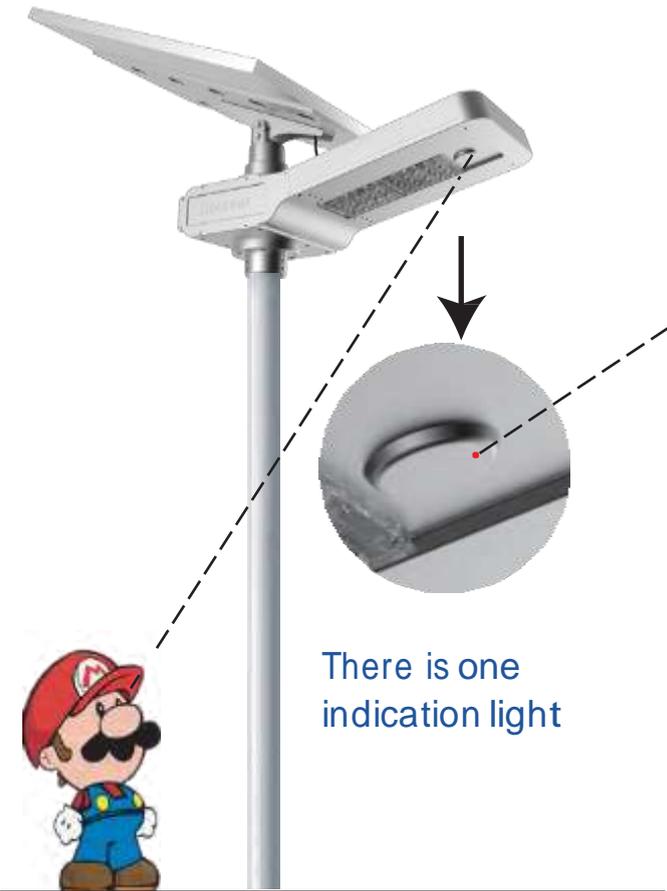


## Controller status instructions



### SC-NH50/65/80

LED light	Indications	Status	Functions
Blue 	Charging indication	Long-term On	The solar panel voltage is higher than light control voltage
		Long-term Off	The solar panel voltage is lower than light control voltage
		Slow twinkling	Be on charging
		Fast twinkling	System overvoltage
RED 	Battery indication	Long-term On	Battery works normally
		Long-term Off	Battery is not connected/No power
		Fast twinkling	Battery is over discharged
Green 	Load indication	Long-term On	Load is on
		Long-term Off	Load is off
		Slow twinkling	Load is in short circuit
		Fast twinkling	Load is in open circuit



### SC-NH100

LED light	Indications	Status	Functions
RED	LED/Battery/Solar panel	Long-term On Long-term Off Slow twinkling Fast twinkling	Battery works normally Battery is not connected/No power Be on charging System faults

**Note:** System faults include:

1. Over discharging of battery.
2. System overvoltage.
3. LED load in short circuit.
4. LED load in open

Easy installation in 5 minutes!



Fix bracket on the panel.

Fix rotating head on the panel.

Connect the panel to the light body.

Package specification:

Pack one lamp with two cartons.

Type	Parts	Box size(L*W*H)	Net Weight	Gross Weight	Volume Weight	20GP	40GP
SC-NH50	Lamp body	725*355*280mm	10kg	11kg	24kg	230sets	490sets
	Panel	675*595*62mm	6kg	7kg			
SC-NH65	Lamp body	725*355*280mm	10.5kg	11kg	26kg	220sets	450sets
	Panel	725*660*62mm	6.5kg	8kg			
SC-NH80	Lamp body	725*355*280mm	11kg	12kg	29kg	200sets	420sets
	Panel	834*730*62mm	9kg	10kg			
SC-NH100	Lamp body	725*355*280mm	12kg	13kg	30kg	190sets	390sets
	Panel	1005*755*65mm	11kg	12kg			

Color box packaged, anti-shock packaging material, with bubble bags and foam, ensure transport safety.

