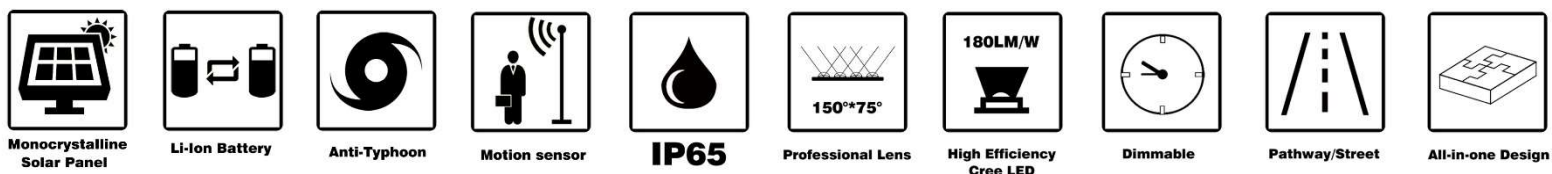


www.hitechled.cn

# D3 Series All-in-one Solar Street Light

## A Smart Renewable Energy Solution



### **Brief Introduction:**

All-in-one integrated solar led street light is a new kind of solar led street light for the road and/or area lighting. It is an green and clean renewable energy product. It integrates the high efficient solar panel, super high-output LED lamp, powerful LiFePO4 lithium battery and a smart power management controller system into a slim compact body. In addition, there is a light sensor on the lamp. At daytime, the solar panel can absorb the solar energy for battery charging, while at dusk, the LED lamp will be on automatically and the battery will supply the energy to the lamp for area illumination. What's more, the lamp can be customized with motion sensor or time control mode. Its brightness standard can be adjusted by movement or time schedule. The system continuously monitors the remaining battery charge and regulates light output automatically to extend operating time. It is extremely versatile, robust and perfect suit for those areas where there is sufficient sunlight. It is 100% powered by solar. It has solved the problem of complex installation and expensive transportation compared with traditional solar LED street light. No external cables, then it is very easy for the installation. It is extremely suit for those places where grid power is not available or wiring is not economical or convenient.

### **Key Features:**

- Solar panel, LED lamp, battery, controller all-in-one integrated compact design;
- No external wires or cables needed; Friendly easy installation;
- Using high brightness Bridgelux/Cree chips(LM80) from USA, efficiency up to 210LM/W; LED lamp upto 130LM/W~180LM/W
- Professional optical lens design adopts light transmittance over 95%, light utilization over 60%;
- IP65 modular LED lamp with fast assembly connector;
- High quality monocrystalline PV adopt over 20% conversion efficiency (IPCE);
- MSDS passed high quality lithium Iron phosphate (LiFePO4) battery adopt lifetime over 2000cycles (5~8 years);
- 100% solar powered green renewable energy;
- Auto turn on at dusk and turn off at dawn;
- PIR motion sensor optional, help to save more power;
- Unique elegant swing-like anti-storm aluminum profile design adopts corrosion protection;
- Drawer function design for easy future maintenance.

### **Benefits:**

- Small volume helps to save freight cost and storage cost;
- No need trenching or wiring job, reduce labor cost and materials cost;
- Renewable energy, no electronic bills any more;
- Professional light distribution design eliminate the light waste;
- High quality durable components ensure 5 to 8 years no maintenance;
- User friendly. Plug & Play design. Fast installation. No need training;
- Green light reduce fossil fuel consumption, eliminating pollution;
- Battery backup for cloudy and rainy days;
- IP65 design suitable for any place where is sufficient sunshine;
- Drawer design easier the possible maintenance of battery and controller;

### **Applications:**

Street, residential road, parking lot, pathway, ramp, farm & ranch lighting, wildlife area, dock& pier, military, personal garden, plaza, highways.....any exterior area wherever there is sufficient sunlight.

**Hitechled Optoelectronics Co.,Ltd.**

Office Add.: 7th F, Bldg.A, GLC Plaza, Baoming 2nd Road, Bao'an district, Shenzhen, China 518102

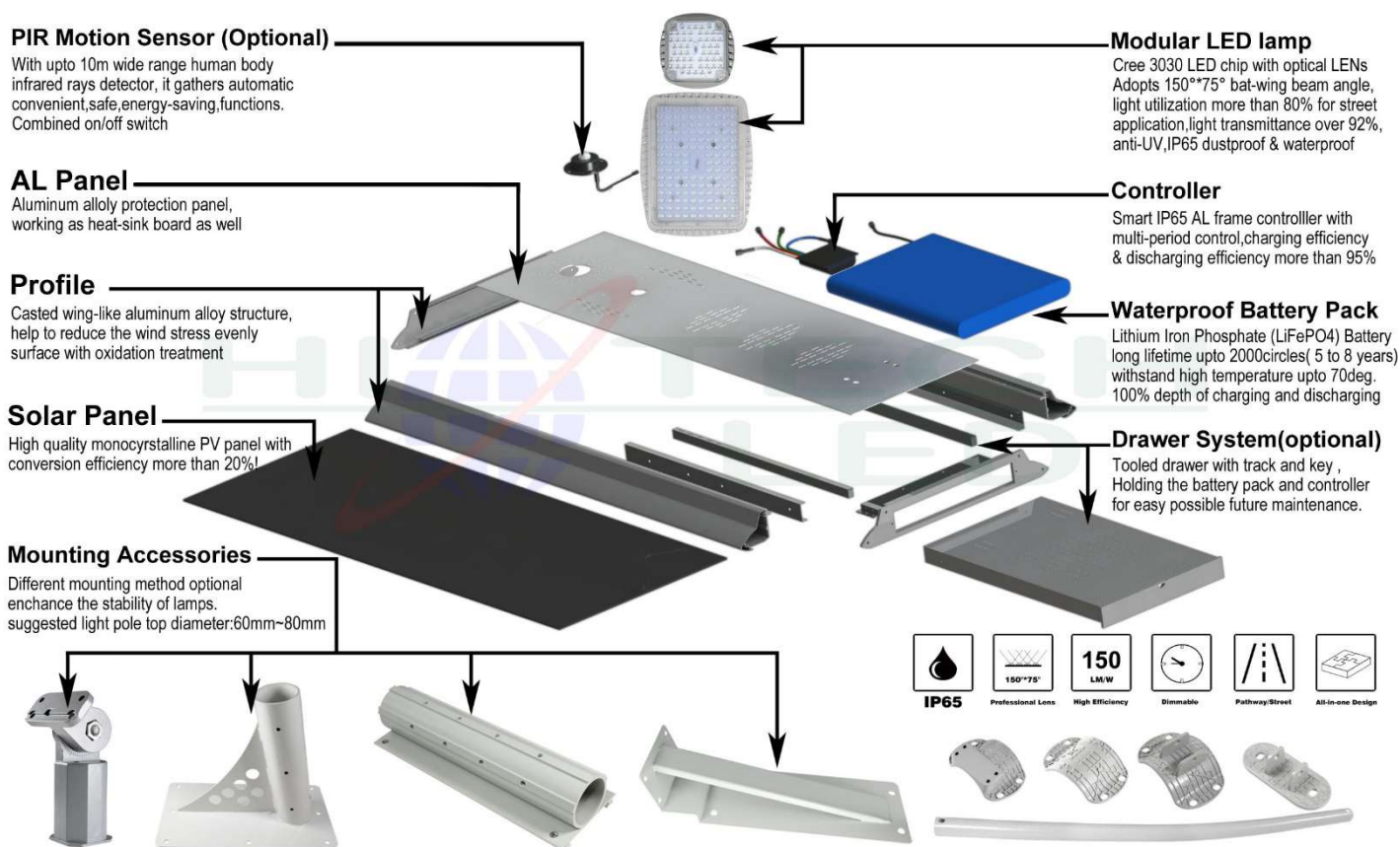
☎ Tel: +86 755 33653232

☎ Fax: +86 755 33653211

✉ E-mail: sales@hitechled.cn

🌐 <https://www.hitechled.cn>

## Structure Diagram:



## Working Process Introduction:



1st Step: Press the "on/off" button to wake up the system. With the latest combined sensor, when you face the solar panel to the sunshine, it would auto wake up the system.



2nd Step: The solar lamp will be off at daytime and start charging when the solar voltage more than 5v.



3rd Step: With the light sensor function, the LED lamp will auto turn on at dusk. It is 30% brightness when standby (if with motion sensor).



4th Step: When movement detected, it will switch to 100% brightness for 30s.



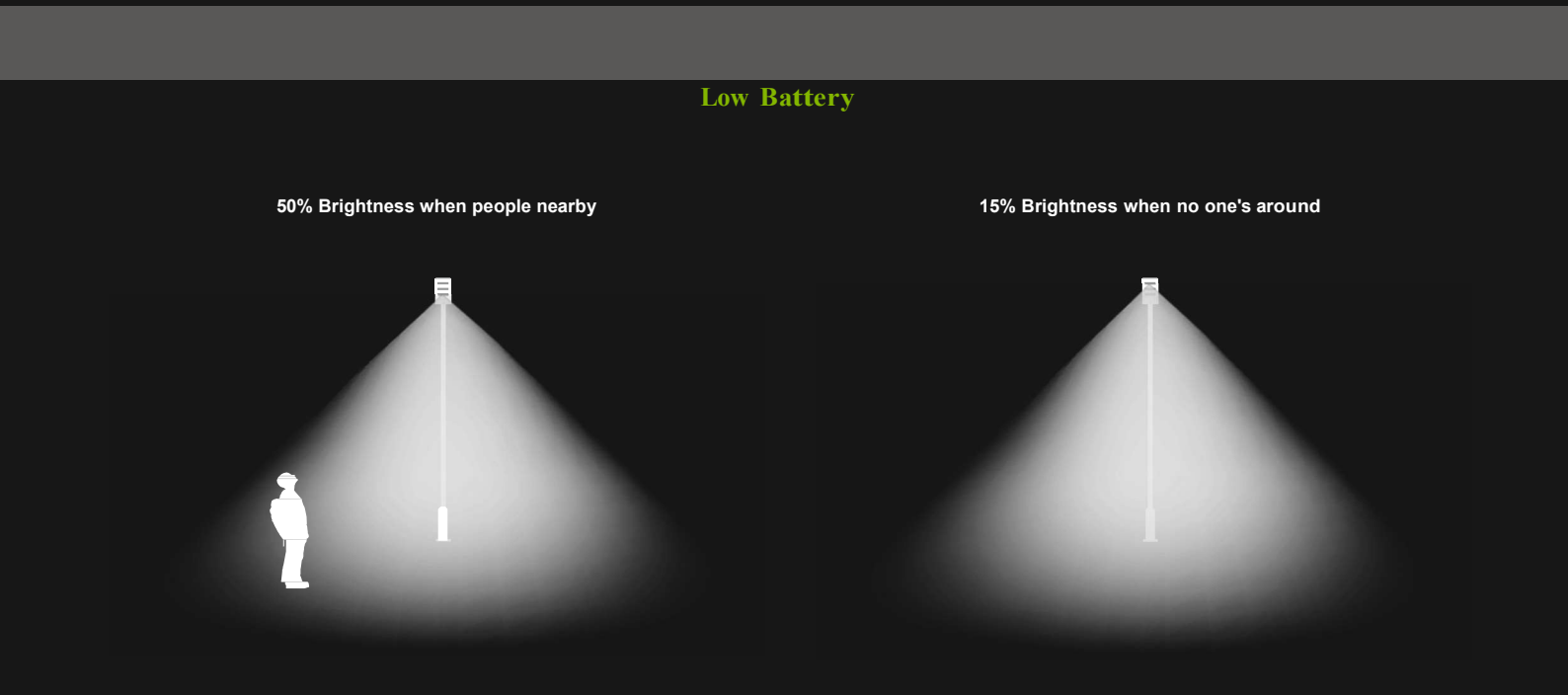
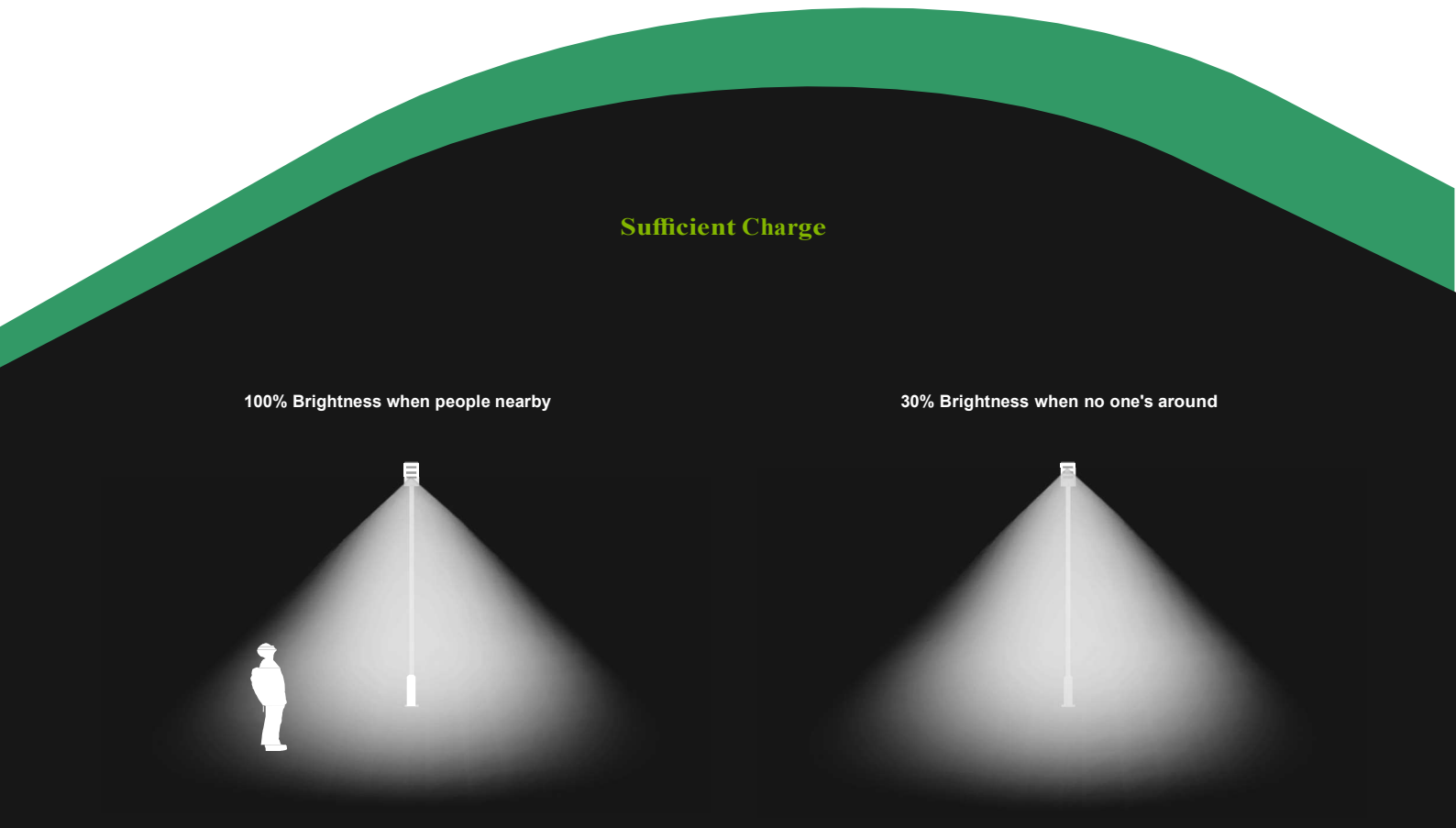
5th Step: If there is no continue movement detected within the sensor area after 30s, it will be standby mode again to save power. The delay time and brightness can be customized.



6th Step: It can be programed to be time control by time schedule as well. Then during different time phase, it is with different brightness.

## INTELLIGENT POWER REGULATION

The intelligent battery control system can automatically adjust the light output power according to the battery storage capacity, effectively extend the working time of the light and ensures the continuous working of the solar street light even in continual rainy days.



For example when the battery storage capacity is sufficient, the lamp power is on standard output (100% brightness when it detects someone, 30% brightness when no one there). When the battery storage capacity is insufficient, it reduces the output power of the lamp (50% brightness when it detects someone, 15% brightness when no one there).



## HIGH QUALITY LI-ION BATTERY + ADVANCED MANAGEMENT SYSTEM

Battery determines system stability and management determines battery's stability. Traditional solar powered streetlights use lead acid batteries that have a very short life cycle and are difficult to maintain, creating massive environmental pollution and a very low ROI.

Therefore HITECHLED use Lithium-ion batteries that have **3 times** the life cycle,

**4 times** the discharge ability and are not harmful to the environment in our

sealed product. However, LiFePO4 Li-ion Battery batteries need a proper battery management system to avoid the "barrel effect".

HITECHLED uses an exclusive patented technology

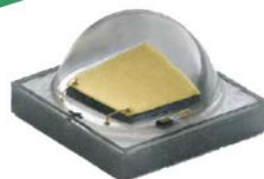
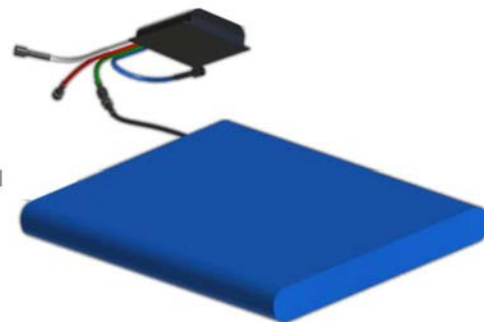
battery management program, enabling the life

span of battery to last for over 6 years,

greatly improving the ROI and at the

same time helping to sustain

the earth's resources.

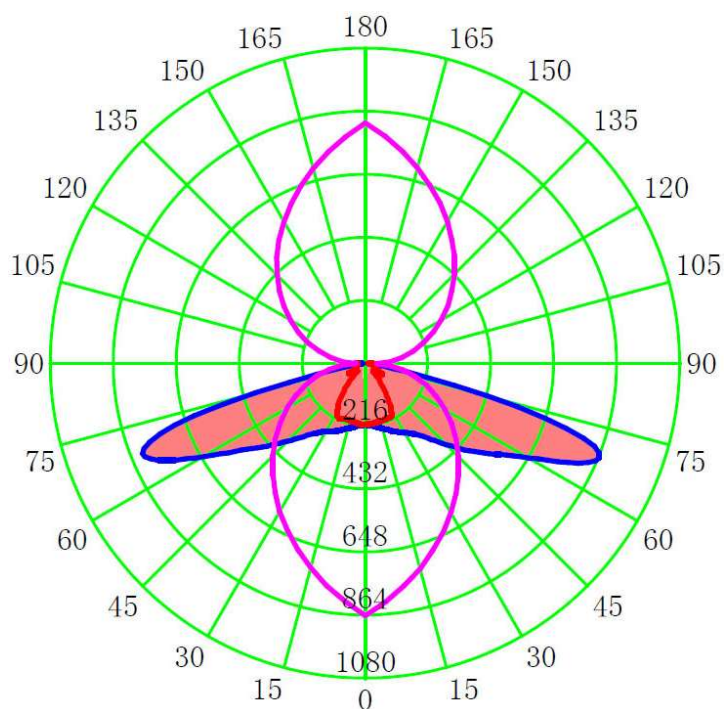


## CREE LED ALUMINUM MOULAR LAMP BASE + BATWING OPTICAL DESIGN

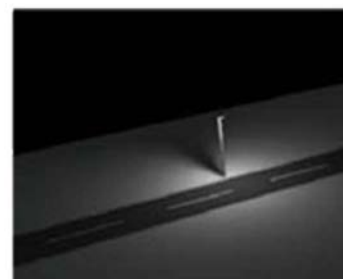
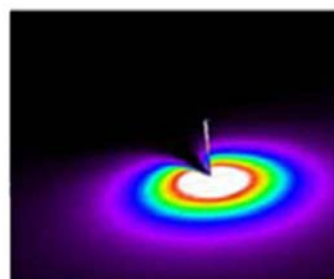


By choosing the high brightness CREE LED chips, the single lumen value can reach 180lm/W (@25°C). With the aluminum lamp base and professional sealed lens, it is IP65 waterproof and with excellent heat dissipation. Thus it maintains high brightness levels with very little fading. The sealed lenses are made of strong UV protected PC and are aging and shock resistant; The BATWING optimized light distribution creates for a more uniform and wider lighting area.

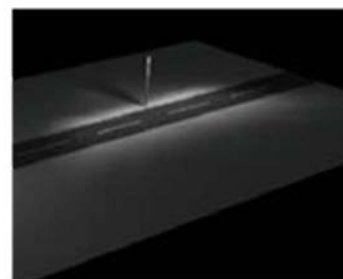
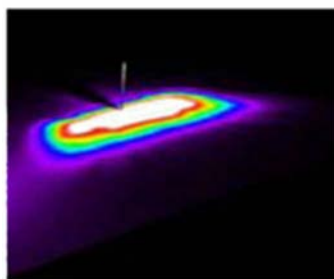
## INTENSITY LIGHT DISTRIBUTION



Traditional lighting distribution effect (Utilization<28%)



Hitechled D3 Solar Light lighting distribution effect (Utilization>80%)



Hitechled Optoelectronics Co.,Ltd.

Office Add.: 7th F, Bldg.A, GLC Plaza, Baoming 2nd Road, Bao'an district, Shenzhen, China 518102

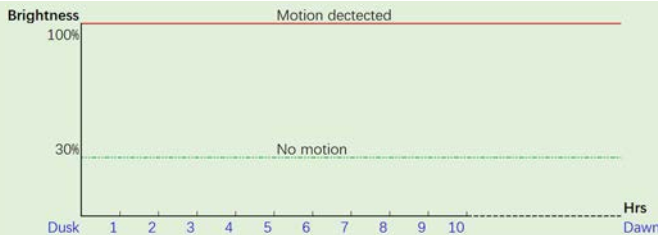
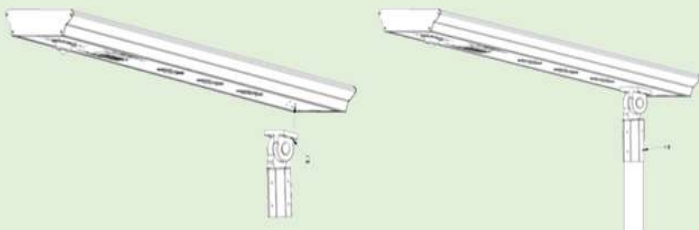
☎ Tel: +86 755 33653232

☎ Fax: +86 755 33653211

✉ E-mail: sales@hitechled.cn

🌐 <https://www.hitechled.cn>

## HITECHLED D3 ALL-IN-ONE SOLAR STREET LIGHT TECHNICAL DATA

Model No.		HT-SS-D340	HT-SS-D350	HT-SS-D360T	HT-SS-D360
Physical Parameters					
Power of PV Module (W)		40	50	60	60
Li-ion Battery Capacity (Wh)		231	308	346	346
Qty. of LED Chips (pcs)		40	50	50	96
PIR Sensor		√	√	√	√
Net Weight of Product (kg)		13	15	18	18
Dimension of Product (mm)		688*376*70	828*376*70	1080*376*70	1080*376*70
Controller Type		Smart MPPT	Smart MPPT	Smart MPPT	Smart MPPT
Light Parameters					
Light output (W)		Max 40W, Typical 20W	Max 50W, Typical 30W	Max 50W, Typical 25W	Max 96W, Typical 40W
Light Distribution		150°/75°	150°/75°	150°/75°	150°/75°
Color Temperature (K)		5000	5000	5000	5000
Typical Luminous Flux (lm)		2000~3000	3500~4500	2800~3800	4000~5000
Min. Working Time (Hours)	Full Bright	15	14	18	12
	Dim Mode	50	44	62	38
Lighting Mode (standard)					
Packing Parameters					
Dimension of Carton (mm)		780*470*155	920*470*155	1170*470*155	1170*470*155
Gross Weight of Product (kg)		15	17	20	20
Packing (pcs)		1	1	1	1
Environment Requirements					
Charge Temperature		0℃~60℃	0℃~60℃	0℃~60℃	-30℃~60℃
Discharge Temperature		-20℃~60℃	-20℃~60℃	-20℃~60℃	-30℃~60℃
Storage Temperature		0℃~45℃	0℃~45℃	0℃~45℃	0℃~45℃
Mounting Recommendations					
Mounting height (m)		4~6	5~6	5~6	5~7
Space between the lamps (m)		10~15	10~20	10~20	15~25
Wind Load Rate (mph)		130	130	130	130
Top of Pole or Tenon OD (mm)		75~90	75~90	75~90	75~90
Product Installation Diagram					
Simple installation! Fixing the screws and all done! Easy adjust the panel direction!					

Hitechled Optoelectronics Co.,Ltd.

Office Add.: 7th F, Bldg.A, GLC Plaza, Baoming 2nd Road, Bao'an district, Shenzhen, China 518102

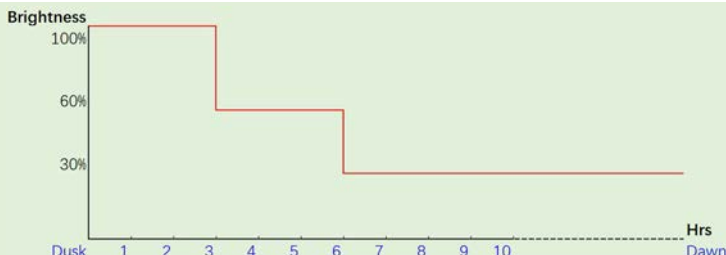
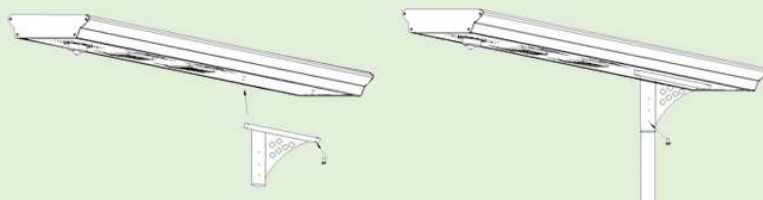
Tel: +86 755 33653232

Fax: +86 755 33653211

E-mail: sales@hitechled.cn

Https://www.hitechled.cn

## HITECHLED D3 ALL-IN-ONE SOLAR STREET LIGHT TECHNICAL DATA

Model No.		HT-SS-D3100T	HT-SS-D3100	HT-SS-D3120	HT-SS-D3135
Physical Parameters					
Power of PV Module (W)		100	100	120	135
Li-ion Battery Capacity (Wh)		461	538	614	768
Qty. of LED Chips (pcs)		96	96	144	144
PIR Sensor		√ or N/A	√ or N/A	N/A	N/A
Net Weight of Product (kg)		24	26	28	31
Dimension of Product (mm)		1158*553*70	1158*553*70	1308*553*70	1478*553*70
Controller Type		Smart MPPT	Smart MPPT	Smart MPPT	Smart MPPT
Light Parameters					
Light output (W)		Max 96W, Typical 50W	Max 96W, Typical 60W	Max 144W, Typical 80W	Max 144W, Typical 100W
Light Distribution		150°/75°	150°/75°	150°/75°	150°/75°
Color Temperature (K)		5000	5000	5000	5000
Typical Luminous Flux (lm)		5000~6500	6000~8500	8000~10000	9000~13000
Min. Working Time (Hours)	Full Bright	12	12	12	12
	Dim Mode	30	30	30	30
Lighting Mode (Standard)					
Packing Parameters					
Dimension of Carton (mm)		1250*650*155	1250*650*155	1410*650*155	1570*650*155
Gross Weight of Product (kg)		28	30	32	35
Packing (pcs)		1	1	1	1
Environment Requirements					
Charge Temperature		0°C~60°C	-30°C~60°C	0°C~60°C	0°C~60°C
Discharge Temperature		-20°C~60°C	-30°C~60°C	-20°C~60°C	-20°C~60°C
Storage Temperature		0°C~45°C	0°C~45°C	0°C~45°C	0°C~45°C
Mounting Recommendations					
Mounting height		6~8	6~8	6~10	8~12
Space between the lamps		20~25	20~25	20~30	20~30
Wind Load Rate (mph)		130	130	130	130
Top of Pole or Tenon OD (mm)		75~90	75~90	75~90	75~90
Product Installation Diagram					
Simple installation! Fixing the screws and all done!					

Hitechled Optoelectronics Co.,Ltd.

Office Add.: 7th F, Bldg.A, GLC Plaza, Baoming 2nd Road, Bao'an district, Shenzhen, China 518102

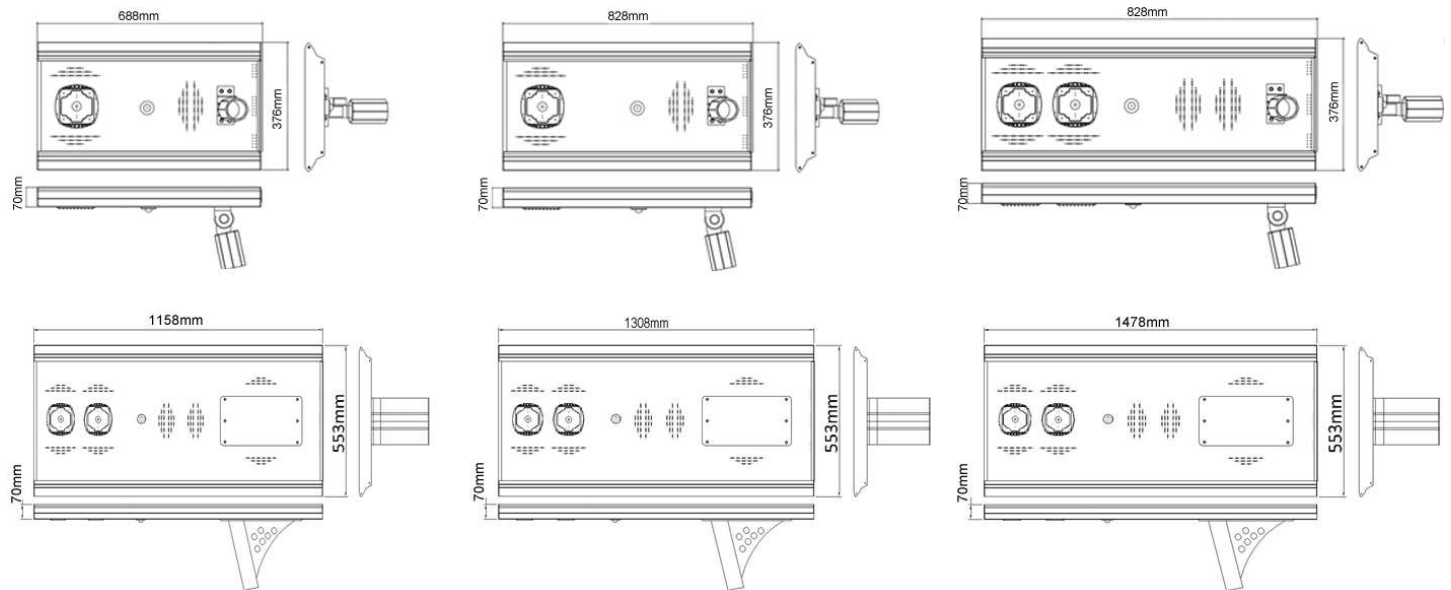
☎ Tel: +86 755 33653232

☎ Fax: +86 755 33653211

✉ E-mail: sales@hitechled.cn

🌐 <https://www.hitechled.cn>

## Physical Dimensions:



## Operation Method:

Just switch on the “on/off” button, the lamp will start to work. That is all. It would turn on at dusk and turn off at dawn automatically.

## Causions:

- Integrated solar led street light cannot work without sunshine charging, please select the suitable product model according to the local sunshine radiation and the annual total radiation.
- Integrated solar led street light adopts the long life Lithium battery for storing energy, charging temperature at day time is between:  $0^{\circ}\text{C}\sim+65^{\circ}\text{C}$ , when temperature goes lower than  $0^{\circ}\text{C}$ , the control system will stop automatically to protect the battery, and it will revive to charge the battery while temperature goes higher than  $0^{\circ}\text{C}$ . Discharging temperature at night is between:  $-20^{\circ}\text{C}\sim+65^{\circ}\text{C}$ , any ambient beyond will bring damage to the battery. Please confirm your local extreme temperature is suitable for above while selecting the street light.
- Battery of the “integrated solar led street light” can be stored for 6 months long after full charged, and please examine, charge it periodically after long time transportation to prevent damage.
- While installed in Northern Hemisphere, please make sure the surface of the solar panel to be facing the South to collect maximum sunshine radiation, while installed in Southern Hemisphere, please make sure the surface of the solar panel to be facing the North to collect maximum sunshine radiation. At the same time please keep it away from any shadow of house, trees etc.
- Keep cleaning the surface of the integrated solar led street light with normal detergent to get maximum power generation, clean the dust or tree leaves or any grease.
- Please avoid installing under the shadow of trees, building and other blocks.