



U4

Series

All-in-one

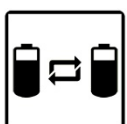
Solar Street Light

A Smart Renewable Energy Solution

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Monocrystalline
Solar Panel



Li-Ion Battery



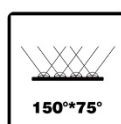
Anti-Typhoon



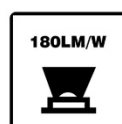
Motion sensor



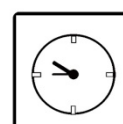
IP65



Professional Lens



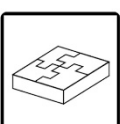
High Efficiency
Cree LED



Dimmable



Pathway/Street



All-in-one Design

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 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;
- Universal anti-storm aluminum profile design adopts corrosion protection;

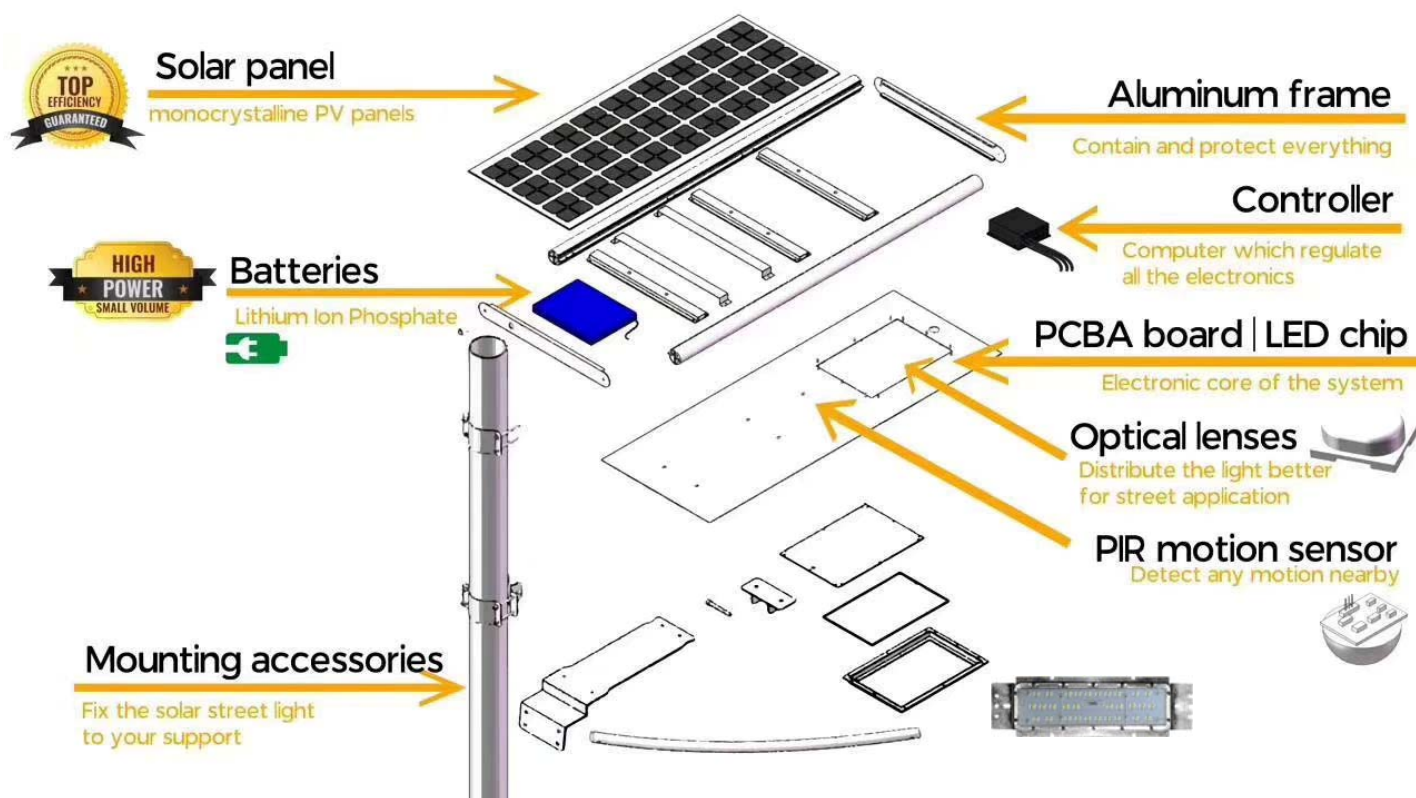
Benefits:

- 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;

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.

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.



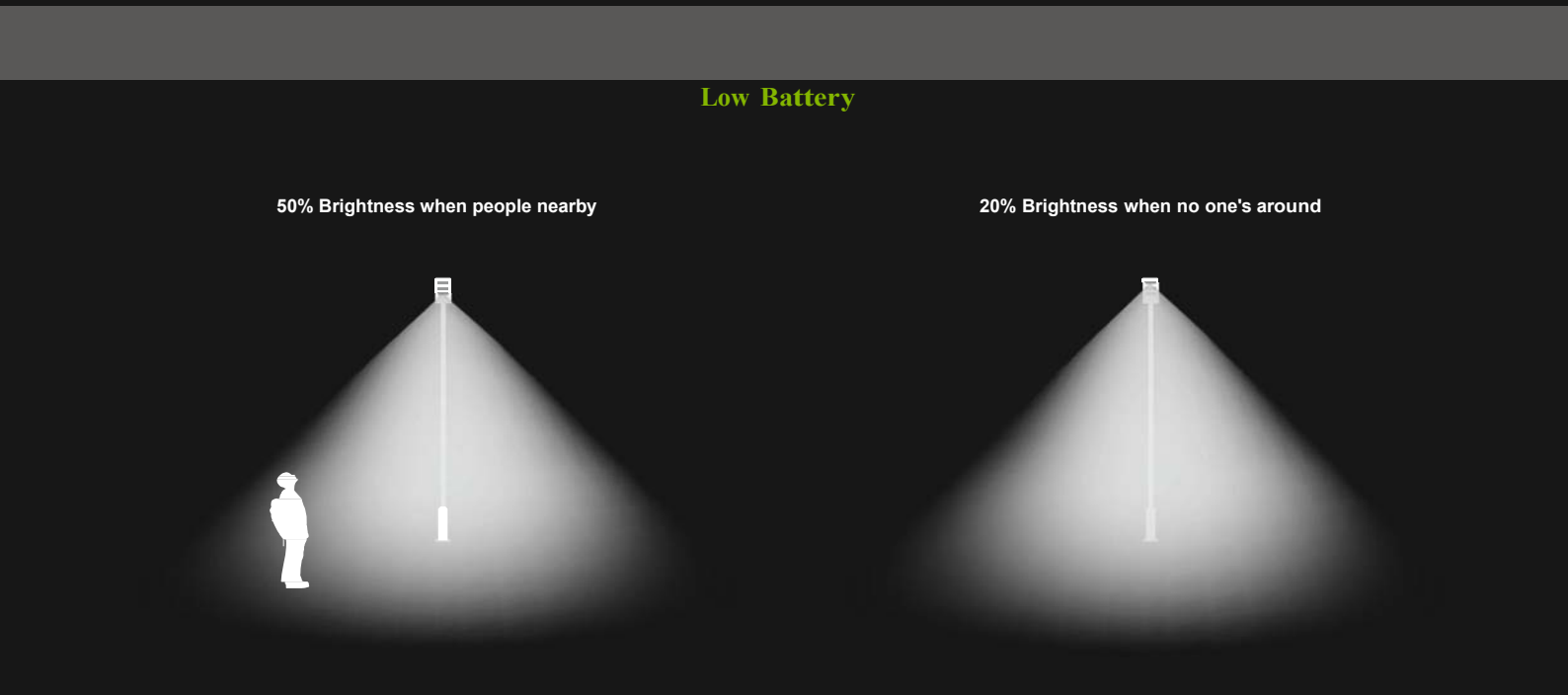
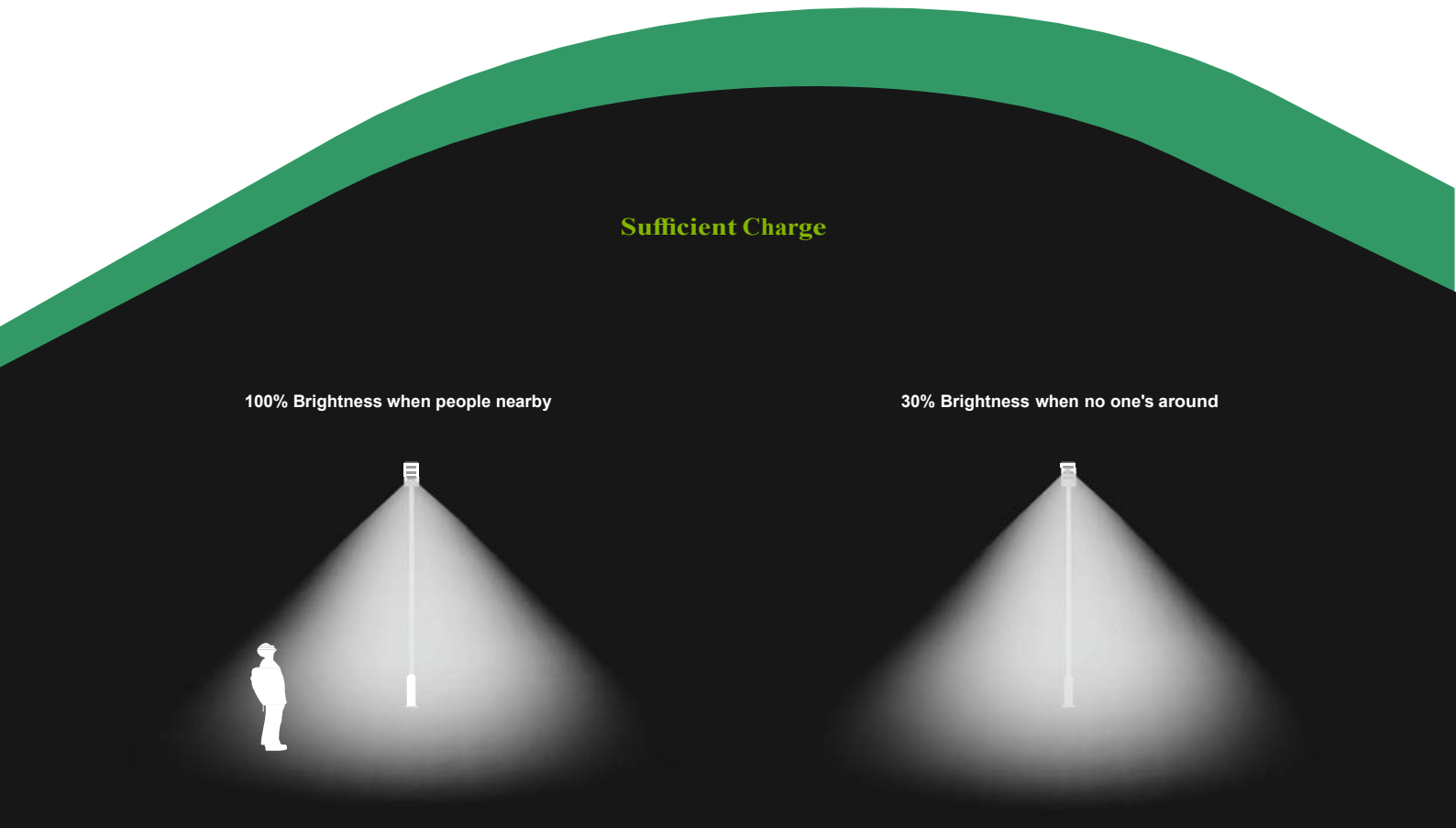
5th Step: If there is no continue movement detected within the sensor area after 30s, it will be standby mode again to save power. The delay time and brightness can be customized.



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

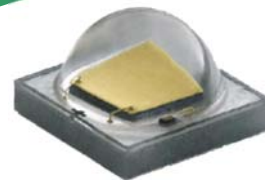
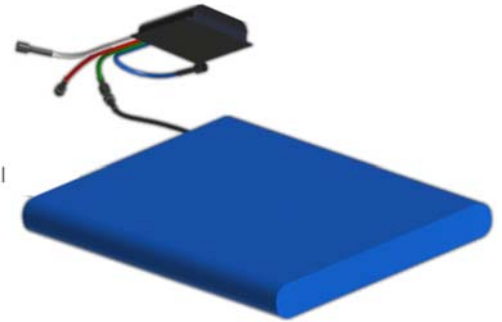
battery management program, enabling the life

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.

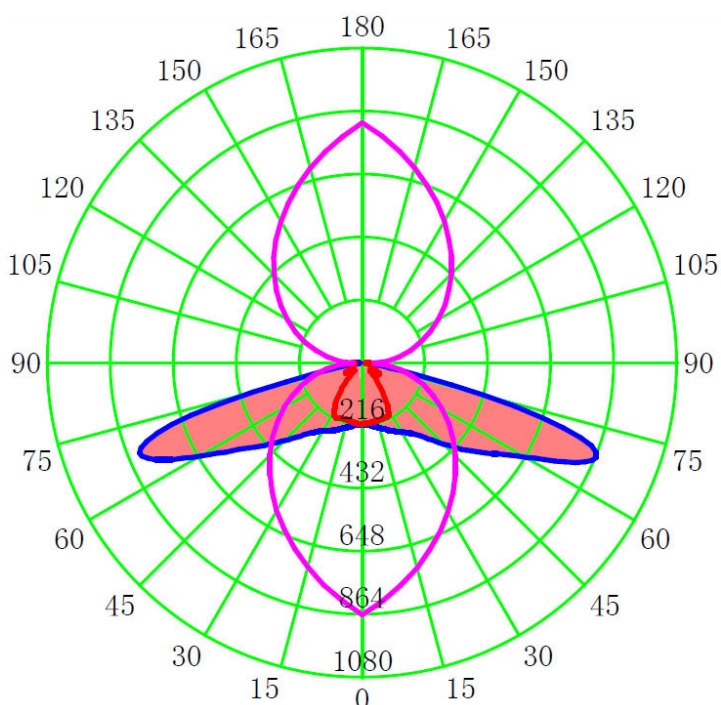


CREE LED ALUMINUM MOULAR LAMP BASE + BATWING OPTICAL DESIGN

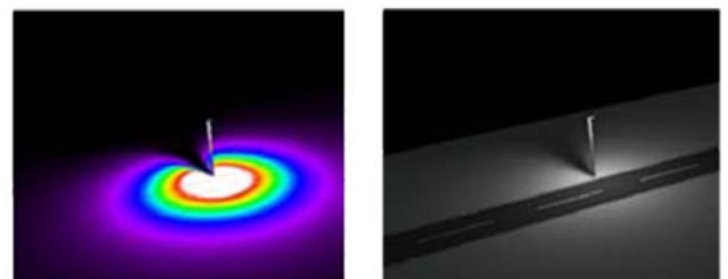


By choosing the high brightness CREE LED chips, the single lumen value can reach 180lm/W (@25°C). With the aluminum lamp base and professional sealed lens, it is IP65 waterproof and with excellent heat dissipation. Thus it maintains high brightness levels with very little fading. The sealed lenses are 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.

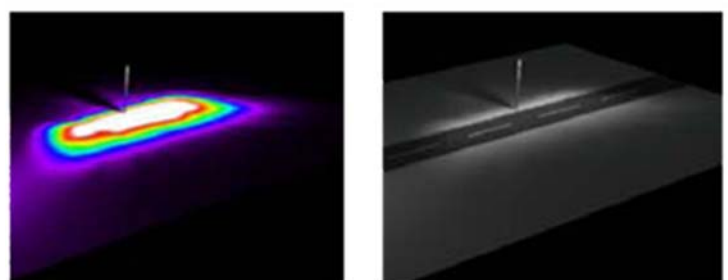
INTENSITY LIGHT DISTRIBUTION



Traditional lighting distribution effect (Utilization<28%)



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



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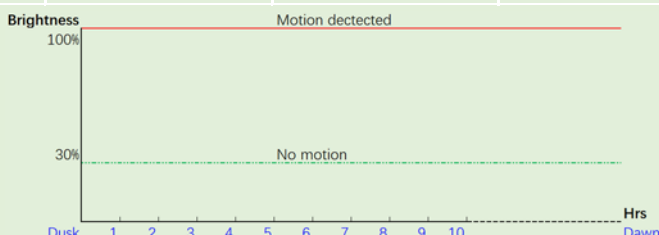

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HITECHLED U4 SERIES ALL-IN-ONE SOLAR STREET LIGHT TECHNICAL DATA

Model No.		HT-SS-U420	HT-SS-U430	HT-SS-U440	HT-SS-U450	HT-SS-U460
Physical Parameters						
Power of PV Module (W)		20	30	40	50	60
Li-ion Battery Capacity (Wh)		12V 8AH	12V 15AH	12V 18AH	12V 21AH	12V 24AH
Qty. of LED Chips (pcs)		30(OPTIONAL)	40(OPTIONAL)	50(OPTIONAL)	96(OPTIONAL)	96(OPTIONAL)
PIR Sensor		√	√	√	√	√
Net Weight of Product (kg)		5.5	7.6	10	13	15
Dimension of Product (mm)		495*305*80	740*305*145	940*305*145 or 685*360*145	1125*300*145 or 835*360*145	1125*360*145
Controller Type		Smart MPPT	Smart MPPT	Smart MPPT	Smart MPPT	Smart MPPT
Light Parameters						
Light output (W)		Max 30W, Typical 10W	Max 40W, Typical 15W	Max 50W, Typical 20W	Max 96W, Typical 30W	Max 96W, Typical 40W
Light Distribution		150°/75°	150°/75°	150°/75°	150°/75°	150°/75°
Color Temperature (K)		6000	6000	6000	6000	6000
Typical Luminous Flux (lm)		1000~1400	1500~2000	2000~2500	3000~4500	4000~5000
Min. Working Time (Hours)	Full Bright	12	14	18	12	12
	Dim Mode	40	50	62	38	36
Lighting Mode (standard)						
Packing Parameters						
Dimension of Carton (mm)		570*370*150	810*370*220	1000*390*220 or 745*440*220	1170*390*220 or 895*440*220	1180*440*220
Gross Weight of Product (kg)		6.5	9.5	12	15	17
Packing (pcs)		1	1	1	1	1
Environment Requirements						
Charge Temperature		0°C~60°C	0°C~60°C	0°C~60°C	0°C~60°C	0°C~60°C
Discharge Temperature		-20°C~60°C	-20°C~60°C	-20°C~60°C	-30°C~60°C	-30°C~60°C
Storage Temperature		0°C~45°C	0°C~45°C	0°C~45°C	0°C~45°C	0°C~45°C
Mounting Recommendations						
Mounting height (m)		3~5	3~5	4~6	4~7	5~7
Space between the lamps (m)		6~15	8~15	10~20	10~20	15~25
Wind Load Rate (mph)		130	130	130	130	130
Top of Pole or Tenon OD (mm)		75~90	75~90	75~90	75~90	75~90
Different Mounting Accessories for Option						
Simple installation! Fixing the screws and all done!						

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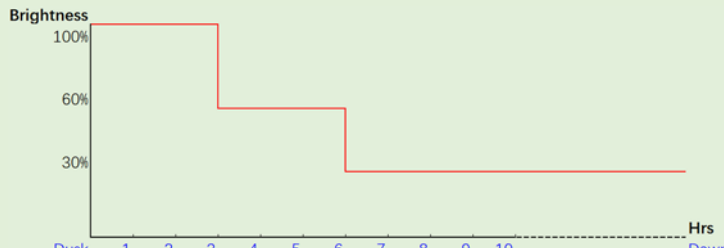
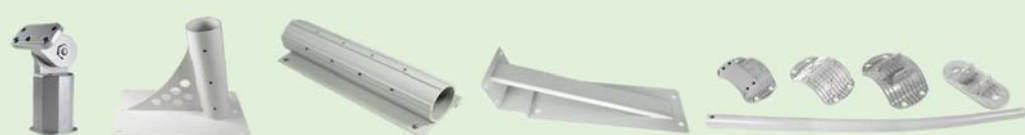
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HITECHLED U4 SERIES ALL-IN-ONE SOLAR STREET LIGHT TECHNICAL DATA

Model No.		HT-SS-U480	HT-SS-U4100	HT-SS-U4120	HT-SS-U4135
Physical Parameters					
Power of PV Module (W)		80	100	120	135
Li-ion Battery Capacity (Wh)		12V 36AH	12V 44AH	12V 60AH	12V 66AH
Qty. of LED Chips (pcs)		96(OPTIONAL)	96(OPTIONAL)	144(OPTIONAL)	144(OPTIONAL)
PIR Sensor		√ or N/A	N/A	N/A	N/A
Net Weight of Product (kg)		21	28	30	32
Dimension of Product (mm)		1125*430*145 or 1295*360*145	1295*528*145	1385*528*145	1478*528*145
Controller Type		Smart MPPT	Smart MPPT	Smart MPPT	Smart MPPT
Light Parameters					
Light output (W)		Max 96W, Typical 60W	Max 96W, Typical 80W	Max 144W, Typical 100W	Max 144W, Typical 120W
Light Distribution		150°/75°	150°/75°	150°/75°	150°/75°
Color Temperature (K)		6000	6000	6000	6000
Typical Luminous Flux (lm)		6000~8000	8000~95000	95000~11000	10000~13000
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)		1180*520*220 or 1360*440*220	1350*620*155	1450*620*155	1570*620*155
Gross Weight of Product (kg)		23	30	33	35
Packing (pcs)		1	1	1	1
Environment Requirements					
Charge Temperature		0℃~60℃	-30℃~60℃	0℃~60℃	0℃~60℃
Discharge Temperature		-20℃~60℃	-30℃~60℃	-20℃~60℃	-20℃~60℃
Storage Temperature		0℃~45℃	0℃~45℃	0℃~45℃	0℃~45℃
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
Different Mounting Accessories for Option					
Simple installation! Fixing the screws and all done!					

Physical Product Pictures:**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.

Cautions:

- 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°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°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.