



**ISD** *ALL IN ONE  
SOLAR STREET LIGHT*

**100+** Patent Certificates  
**\$1,000,000+** Annual Energy Saving  
**10,000+** Projects Successfully Installed



**OVER 10 YEARS**   
**EXPERIENCE**  
[www.aokledlight.com](http://www.aokledlight.com)

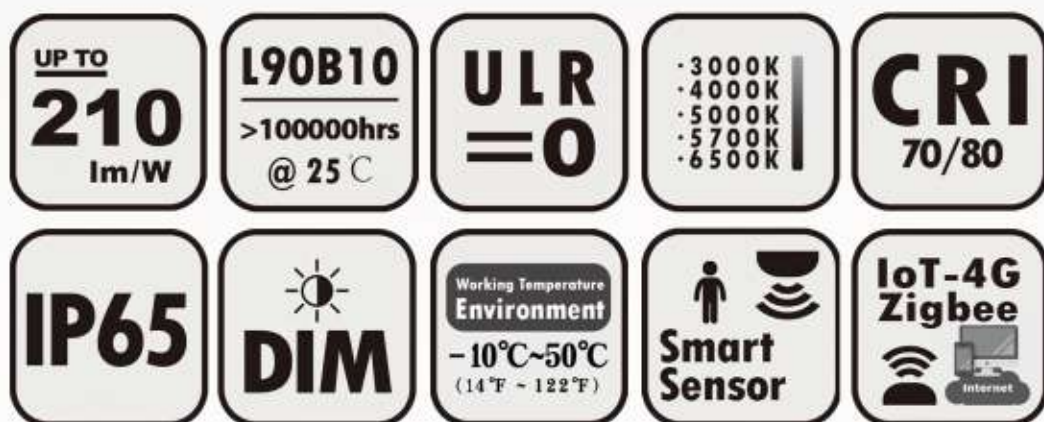


## > Features of SD Series

Outdoor solar lighting systems use solar cells which convert sunlight into electricity. Electricity is stored in batteries for use at night.

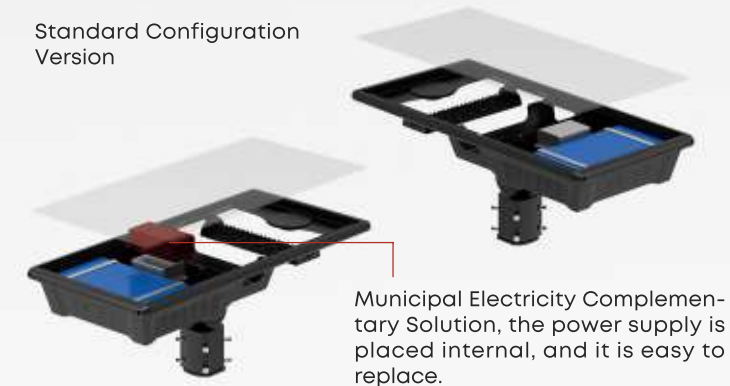
SD series LED solar lights are easy to install and virtually maintenance free. Using them won't increase your electric bill.

- SD Solar LED Street Light features all in one design function, low profile design, with photocell sensor, Timing, dimming, intelligent power saving, microwave sensor or PIR sensor optional.
- **Power range:** from 20W to 120W;
- Single side monocrystalline solar panel. Suitable for remote region, no-electric supply zone;
- Deep cycle battery, charge and discharge over 2000 times;
- Continuously work 2-3 rainy days in intelligent mode;
- **MPPT intelligent controller;**
- Die-casting aluminium housing, anti-corrosion coating;
- Easy battery replacement design;
- Ultra-high light efficiency, 10 watts equivalent to 20 watts of others at least;
- Accurate optical road lighting designs, adapt to various conditions with no waste of light. **ULOR=0%, no up-light pollution;**
- Optical systems maintain an IP65 rating.



### Municipal Electricity Complementary Solution Optional (20W-60W only)

Standard Configuration Version



When the battery voltage is lower than the set value, the power supply will switch to mains power, and when the voltage is higher than the set value, it will switch to battery power. The standard configuration does not include mains complementary function.



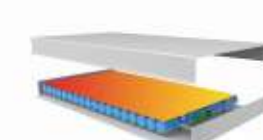
### Adjustable module



Integral Monocrystalline Silicon Solar Panel

Conversion Rate up to 30%

25 Years Lifespan




**>2000times**  
Lifespan Cycle  
High quality Li-ion battery  
Intelligent temperature control




# > Photometrics Design


Lumen efficiency > 210lm/W  
achieve higher  
illumination




High Efficiency



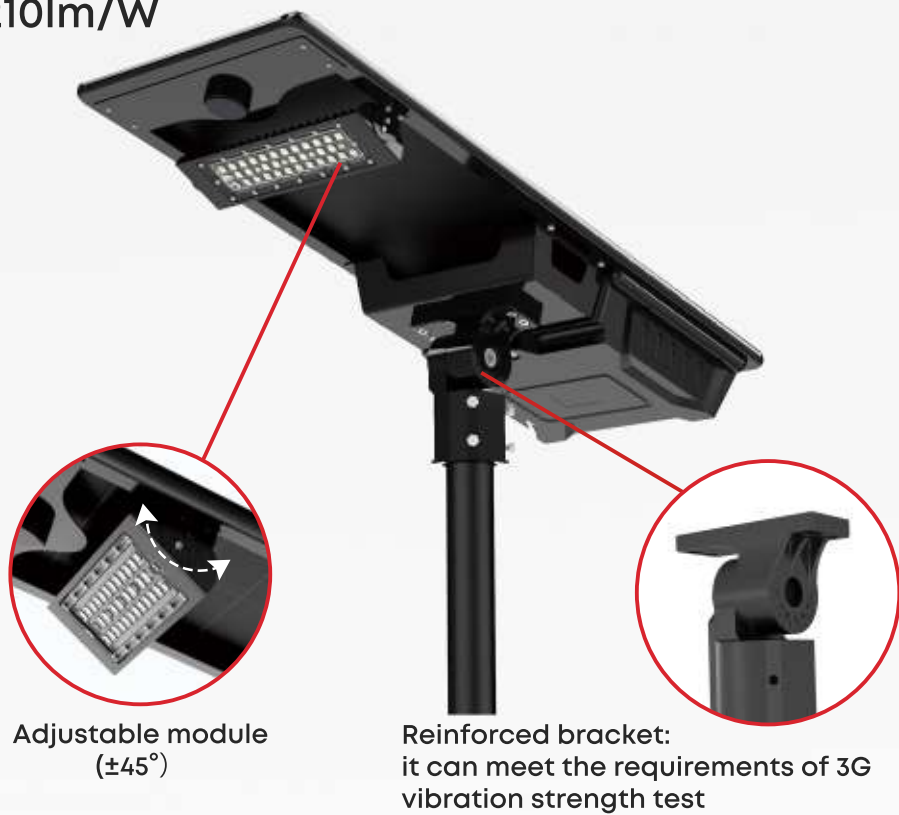
Long Lifespan



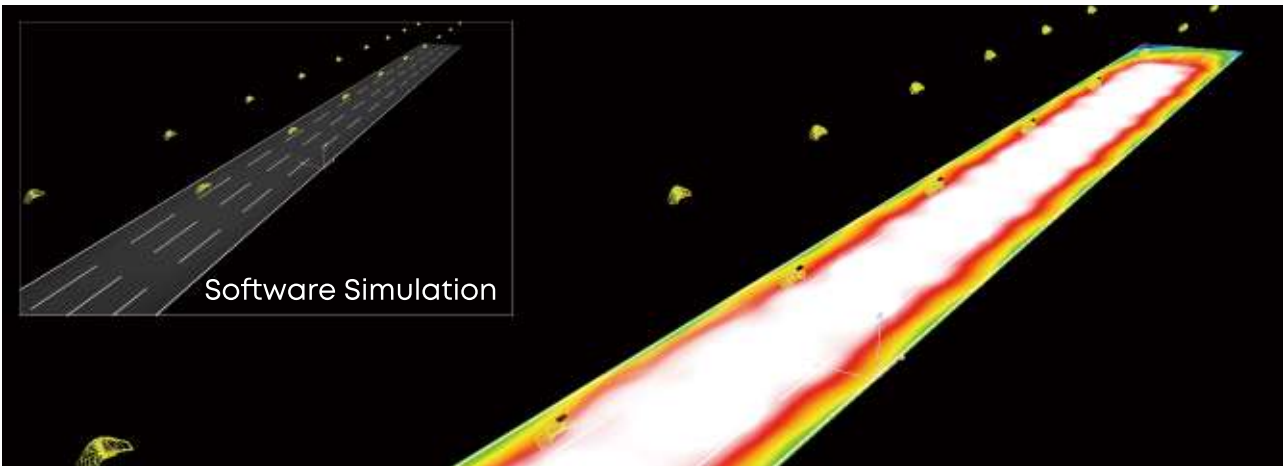
Less Calorific Value



Low Light Decay



- The light engine takes advantage of the latest generation of high efficiency LEDs and dedicated optics for professional applications.
- Combined with 5050 LED chips provide lighting solutions from high-level special lights to very cost-effective but excellent quality luminaires.



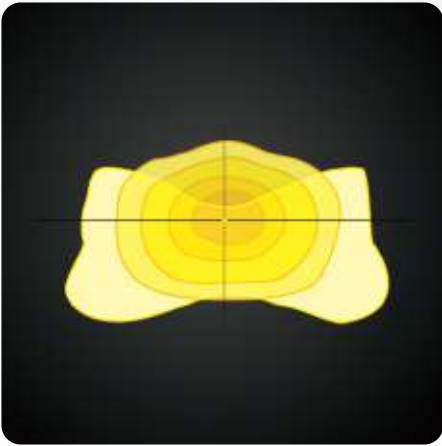
## Distribution

LED model:5050 (adjustable)

T203(20-120W)



T304(20-120W)



T502(20-120W)





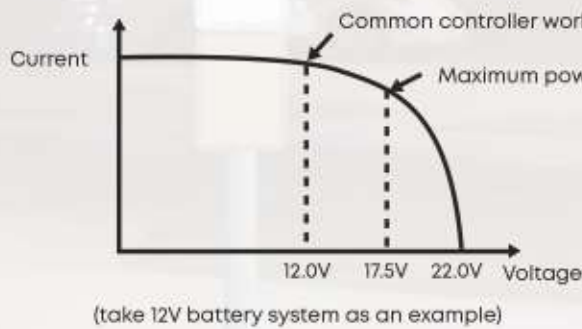
# > Application Reference

- Road lighting
- Area lighting
- Perimeter lighting

## Customizable Housing Color

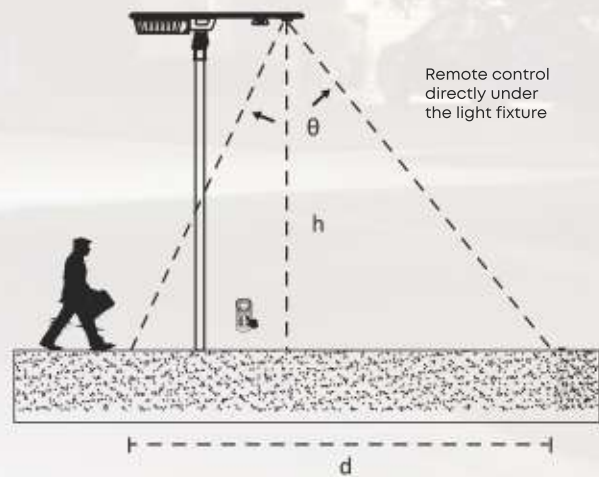


## Advantages of controller



- 1) Moving Track MPPT maximum power tracking technology is adopted to improve the tracking efficiency and speed by more than 20%;
- 2) UltraGreen power control technology with extremely low static power consumption and sleep current;
- 3) 10 time-periods programmable load power/time control;
- 4) Multiple intelligent power modes can be selected, and the load power can be automatically adjusted according to the battery power;
- 5) Multiple protection functions such as battery /PV reverse connection protection, LED short circuit/open circuit/power limit protection;
- 6) Aluminum metal housing, IP67 waterproof rating, can be used in a variety of harsh environments
- 7) Extensible IoT remote communication monitoring function;

## Detection distance



Remote control distance 5-8 meters, installation height and environment and other factors will affect the controller sensitivity, please refer to the actual field.  
Note: Please do not place 2 or more lights within 12 meters at the same time while using the remote controller, receiving or sending may fail.

Inductive Type (alternative)	θ-Angle (X-axis rotation: 360°)	h (Height of lamp rod)	d (Inductive width)
IR (Infrared)	60°	6-8m	6-10m
WB (Microwave)	65°	6-10m	7-10m

\*Remote control is optional



# > Application of Typical Networking of Smart Street Light(optional)

## Strategy Control

By installing the node of the street light controller on the ambient light sensor, electric energy metering unit to collect to the street light power (voltage, current, power), and the ambient light conditions, according to the administrator deployment strategy to mobilize installed on the street light controller of the automatic control system to control the street light switch, adjust brightness, color temperature adjustment, etc.;

## Gateway Control

The Lora Light wireless system with strong anti-interference ability is adopted in the wireless transmission unit of the street light controller to realize the communication between nodes and gateways. The data of various sensors on the node street lamp controller is sent back to the gateway, and the control command of the gateway is also sent to the node street light controller.

## Cloud Platform

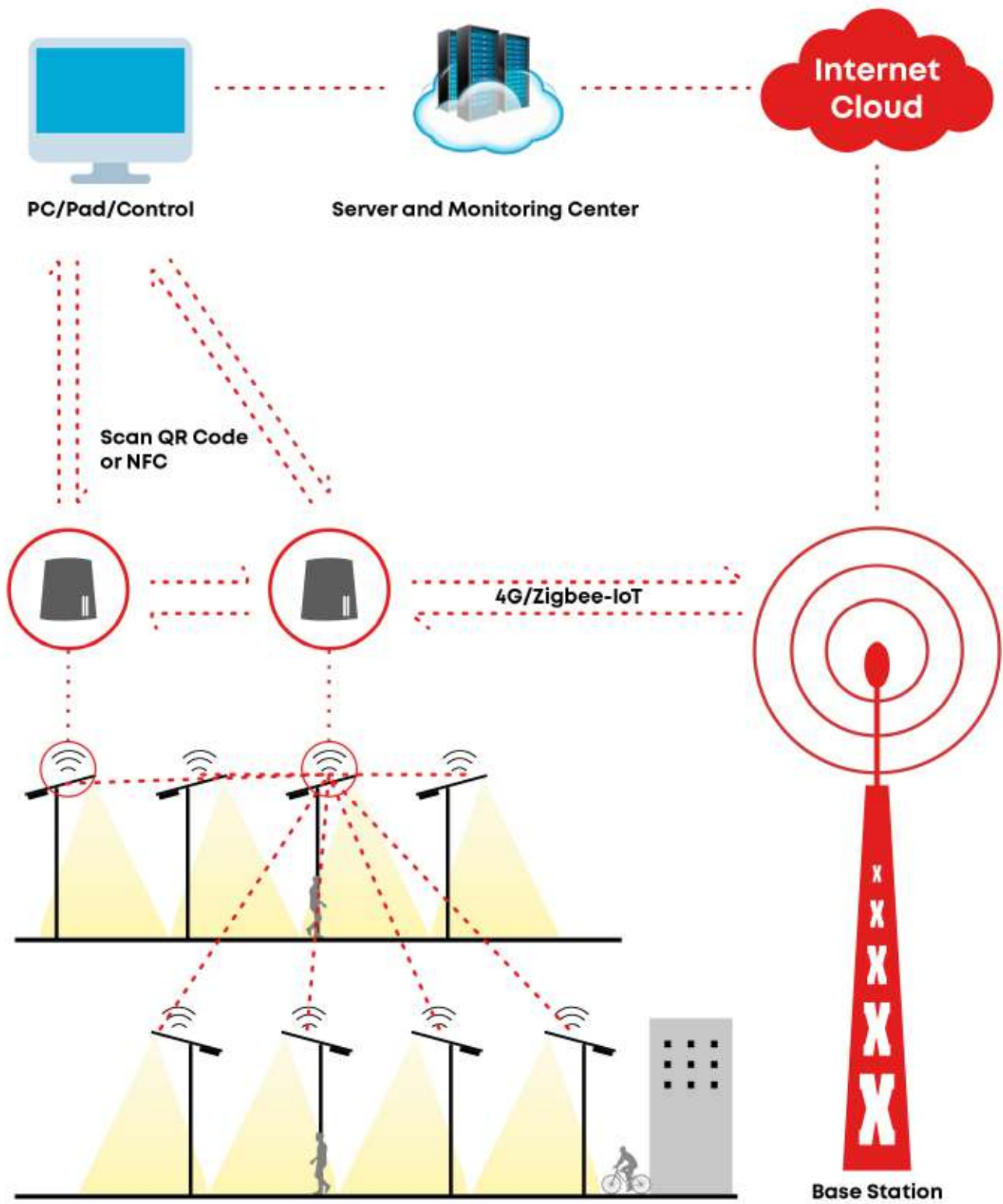
The gateway controller transmits the street light control information of all nodes under the gateway to the cloud platform through 4G/Zigbee-IoT (optional) wireless mode, and at the same time sends the instructions of the cloud platform to the street light controller of each node.

## Controller IoT-4G/Zigbee



- Built-in IoT module (4G/Zigbee)
- Adopt Moving Track MPPT maximum power tracking technology, with higher tracking efficiency and faster speed;
- Lead-acid battery and lithium battery are universal. Operating parameters can be set by remote controller;
- Ultra green power control technology with extremely low static power consumption and dormant current;
- Lead acid battery multi-stage temperature compensated constant voltage charging;
- 10 Programmable load power/time control setting;
- Battery charging and discharging high and low temperature protection function, working temperature can be set;
- A variety of intelligent modes can be selected, automatically adjust the load power according to the battery power;
- High precision digital booster constant-current control algorithm, high efficiency and high constant-current precision;
- 2.4G wireless communication, can set read parameters, read status, etc;
- Battery/PV reverse connection protection, LED short circuit/open circuit/limited power protection and other multiple protection functions.

## APPLICATION OF TYPICAL IOT NETWORKING



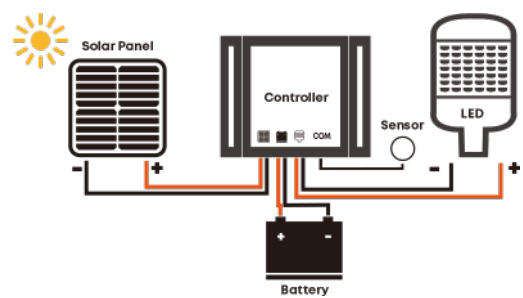
\*Due to the constant improvements in product development, individual parameters might change. Please refer to our sales or R&D team for most up-to-date content as specifications are subject to change without notice.



Parameter Table

Electrical Data									
Model		AOK-SD20	AOK-SD30	AOK-SD40	AOK-SD50	AOK-SD60	AOK-SD80	AOK-SD100	AOK-SD120
Power		20W	30W	40W	50W	60W	80W	100W	120W
Control Option	Photocell sensor, Timing, dimming, intelligent power saving, microwave sensor or PIR sensor.								
Work Mode	2H-100%; 4H-Detected: 60%, None: 20%; 6H-Detected: 40%, None: 10%								
Photometric Data									
LED model	5050=adjustable, Distribution: T2/T3/T5 optional								
Lens	Polycarbonate								
Efficacy (lm/W, Std. Dev. ±3%)@CCT=5700K, CRI>70Ra	5050	210lm/W	210lm/W	200lm/W	210lm/W	210lm/W	200lm/W	210lm/W	200lm/W
Luminous flux (lm, Std. Dev. ±10%)@CCT=5700K, CRI>70Ra	5050	4200lm	6300lm	8000lm	10500lm	12600lm	16000lm	21000lm	24000lm
ULOR	= 0%, @ Luminaire inclination 0°								
CCT	3000K, 4000K, 5000K, 5700K, 6500K								
CRI	70Ra/80Ra optional								
Beam angle	5050=adjustable, Distribution(20W-120W):T203(60°*155°)/T304(75°*160°)/T502(150°*150°)								
Mechanical Data									
SCx (EPA) Fixed module	Top View: 0.340m² (3.65ft²) Side View: 0.067m² (0.72ft²) Front View: 0.052m² (0.56ft²)	Top View: 0.400m² (4.31ft²) Side View: 0.072m² (0.78ft²) Front View: 0.052m² (0.56ft²)	Top View: 0.470m² (5.06ft²) Side View: 0.077m² (0.83ft²) Front View: 0.052m² (0.56ft²)	Top View: 0.530m² (5.70ft²) Side View: 0.082m² (0.88ft²) Front View: 0.052m² (0.56ft²)	Top View: 0.590m² (6.35ft²) Side View: 0.085m² (0.91ft²) Front View: 0.052m² (0.56ft²)	Top View: 0.690m² (7.43ft²) Side View: 0.082m² (0.88ft²) Front View: 0.062m² (0.67ft²)	Top View: 0.750m² (8.07ft²) Side View: 0.084m² (0.90ft²) Front View: 0.062m² (0.67ft²)	Top View: 0.910m² (9.80ft²) Side View: 0.091m² (0.98ft²) Front View: 0.062m² (0.67ft²)	
IP Rating	IP65, according to standard EN 60529								
Housing	Heavy-duty die-cast aluminum (EN AC-46100)+PA66								
Surface treatment	Anti-UV thermosetting polyester / 80 micron epoxy primer + Anti-UV thermosetting polyester (for extremely corrosive environments).								
Painting	Black, Custom request								
Mounting	Post Top								
Solar Panel Data									
Photovoltaic panel	Single side monocrystalline solar panel								
Solar panel voltage(W)	16V 40W	18V 50W	18V 60W	18V 70W	18V 80W	36V 100W	36V 120W	36V 150W	
Battery voltage(AH)	12.8V 12AH	12.8V 18AH	12.8V 24AH	12.8V 30AH	12.8V 36AH	25.6V 24AH	25.6V 30AH	25.6V 36AH	
Li-ion Battery(WH)	153.6WH	230.4WH	307.2WH	384WH	460.8WH	614.4WH	768WH	921.6WH	
Charing Time	4.2Hrs	4.8Hrs	5.0Hrs	5.7Hrs	6.1Hrs	6.5Hrs	6.8Hrs	6.5Hrs	
Run Time(@full power)	7.1hrs	7.1hrs	7.1hrs	7.2hrs	7.2hrs	7.2Hrs	7.2Hrs	7.2Hrs	
Battery lifespan	>2000 times cycle								
Ambient Temperature	-10°C to 50°C (14°F to 122°F)								
Storage Temperature	-20°C to 45°C (-4°F to 113°F)								
Control system	MPPT/PWM optional								
Maximum Autonomy	Operate 2~3 rainy days under intelligent model.								
Others									
Lifespan	L90B10 - 100000 hrs. @Tq 25°C								
Warranty	3 years (Warranty extension up to 5 years on request)								
Certification	CE/FCC/RoHs,For other certificates please request								
Product Size	750*366*106mm	910*366*106mm	1080*366*106mm	1210*366*106mm	1345*366*106mm	1060*550*110mm	1145*550*110mm	1390*550*110mm	
Net Weight	10kg	12kg	14kg	16kg	18kg	20kg	22kg	24kg	
Carton Size	1025*440*195mm	1025*440*195mm	1195*440*195mm	1325*440*195mm	1460*440*195mm	1180*640*240mm	1265*640*240mm	1510*640*240mm	
Gross Weight	12kg	14kg	16kg	18kg	20kg	22kg	24kg	26kg	
Recommend installation height	3-5m	4-7m	5-7m	5-7m	6-8m	7-9m	8-10m	8-12m	
Application field	Urban and rural street								

Working Way



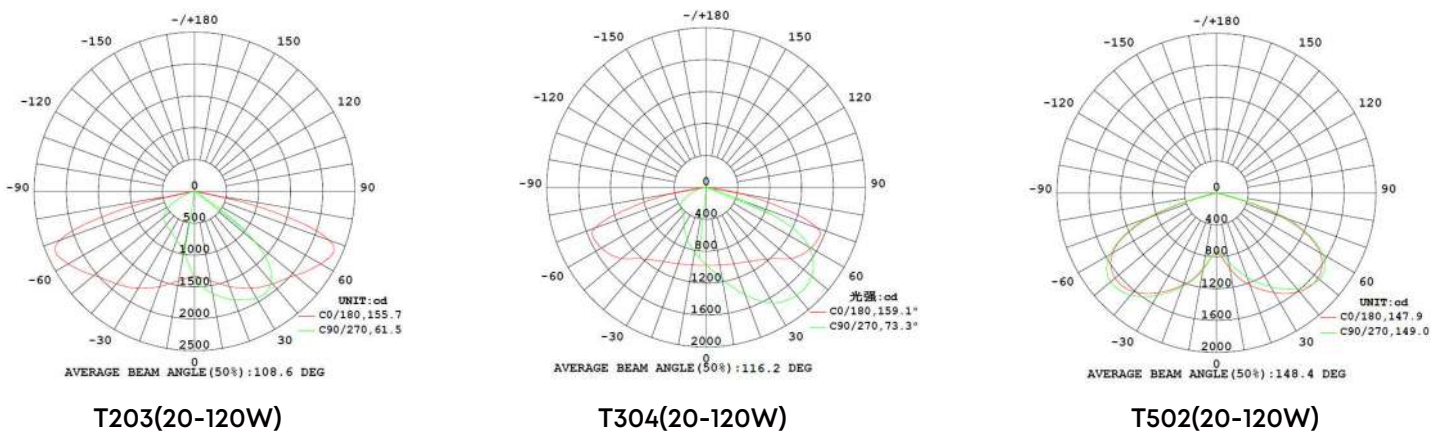
Solar panels receive sunlight during the day to generate electricity, which is charged by a controller to a battery; When the solar panel voltage is lower than the set value (rated 5V), the controller will stop charging and drive the LED to emit light. When the battery voltage is lower than the set value, the power supply will switch to mains power, and when the voltage is higher than the set value, it will switch to battery power. The standard configuration does not include mains complementary function.

Ordering Information

AOK								
MODEL	VOLTAGE	LED CHIPS	TYPE OF SENSOR	CCT&CRI	DISTRIBUTION	MOUNT	HOUSING	MODULE
SD20	DC=Solar	A5=5050	00=Without Sensor	3070=3000K 70CRI	T2=TYPE II	A=Post Top	BK=Black	adjustable
SD30	HB=Hybrid		PIR=PIR Sensor	4070=4000K 70CRI	T3=TYPE III		Custom request	
SD40	NV=Grid		MS=Microwave Sensor	5070=5000K 70CRI	T5=TYPE V			
SD50				5770=5700K 70CRI				
SD60				6570=6500K 70CRI				
SD80				3080=3000K 80CRI				
SD100				4080=4000K 80CRI				
SD120				5080=5000K 80CRI				
				5780=5700K 80CRI				
				6580=6500K 80CRI				

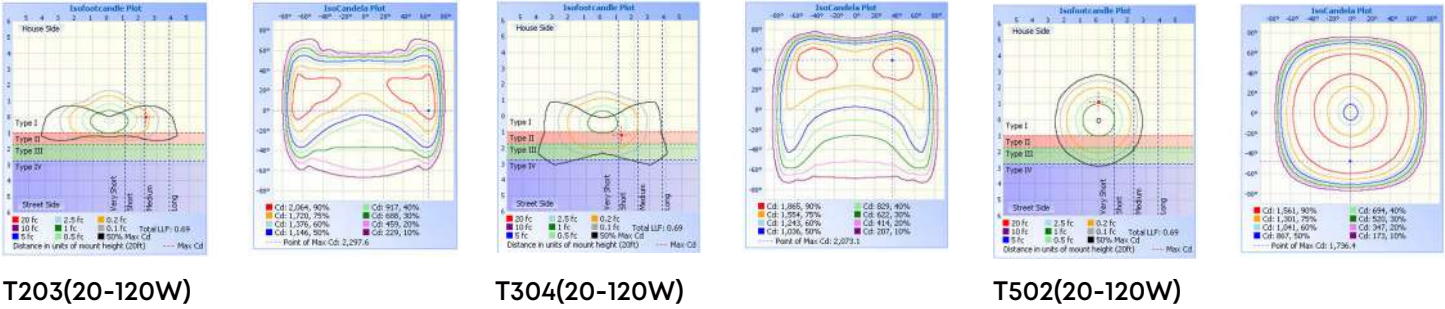
Photometry

LED model: 5050 (adjustable)



Illuminance Diagram

LED model: 5050 (adjustable)



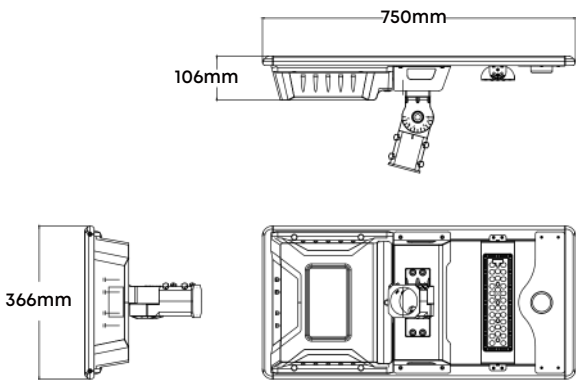
SD Series Specification Sheet

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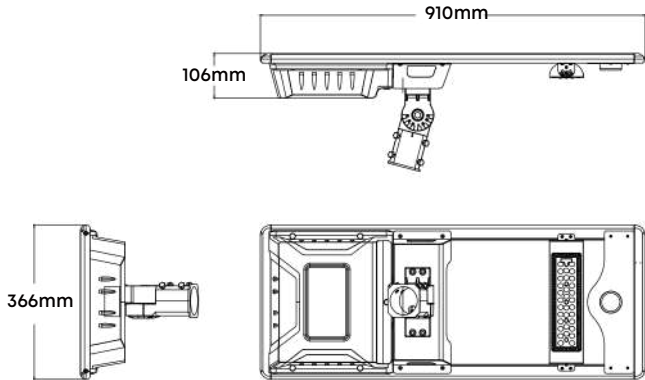


Dimensions (Adjustable module)

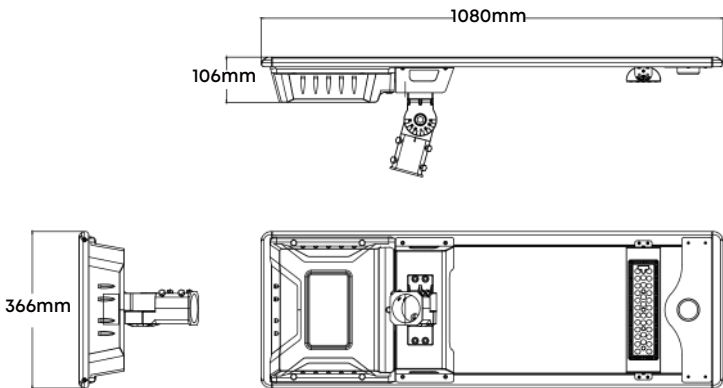
SD20-20W (LED model: 5050 ; Distribution: T2/T3/T5)



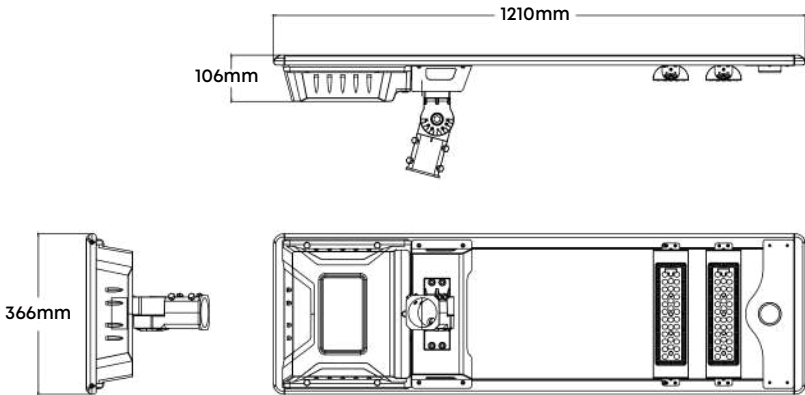
SD30-30W (LED model: 5050 ; Distribution: T2/T3/T5)



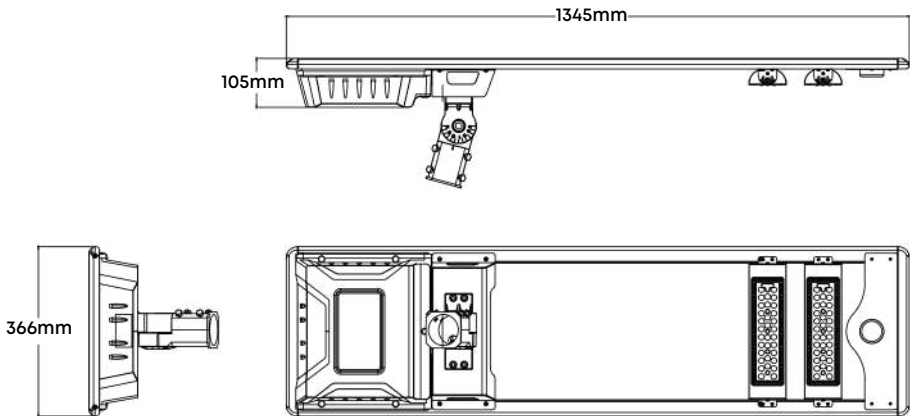
SD40-40W (LED model: 5050 ; Distribution: T2/T3/T5)



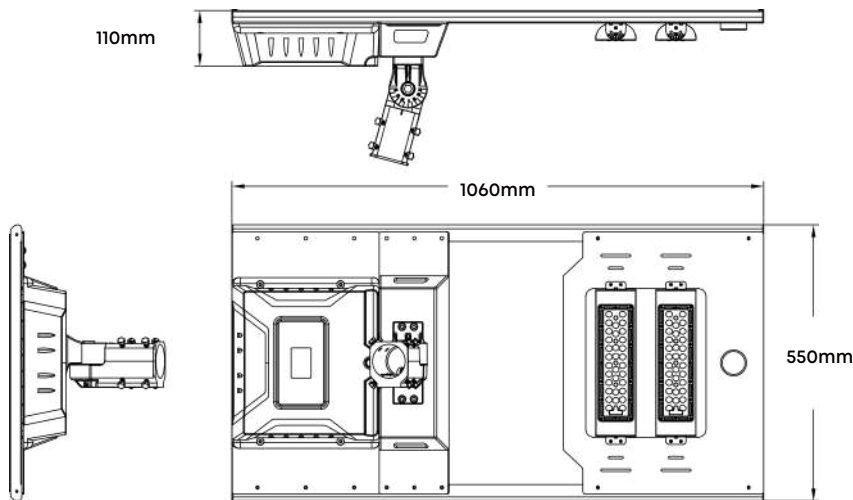
SD50-50W (LED model: 5050 ; Distribution: T2/T3/T5)



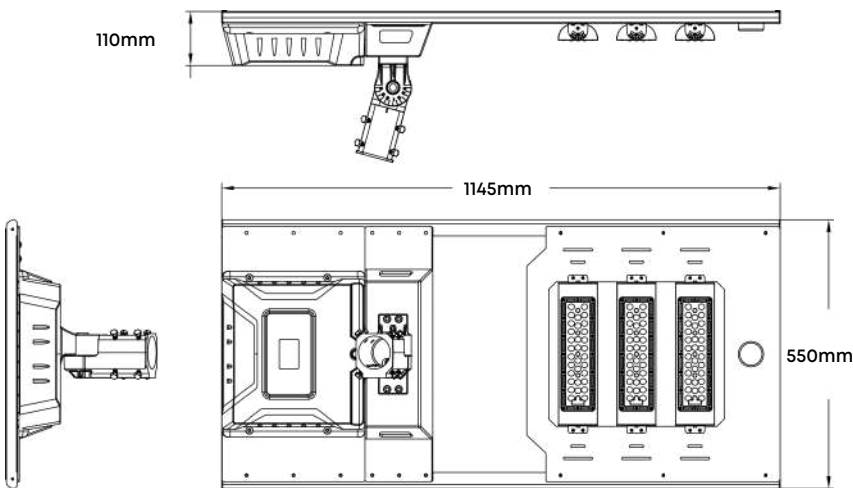
SD60-60W (LED model: 5050 ; Distribution: T2/T3/T5)



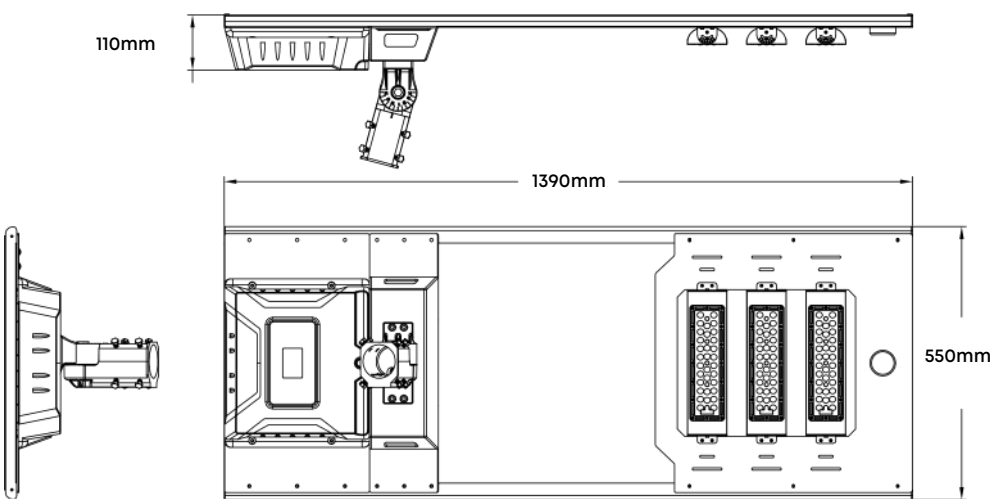
SD80-80W (LED model: 5050 ; Distribution: T2/T3/T5)



SD100-100W (LED model: 5050 ; Distribution: T2/T3/T5)



SD120-120W (LED model: 5050 ; Distribution: T2/T3/T5)



SD Series Specification Sheet

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# Illuminate Your Future



3 Year Limited Warranty,  
5 Year Preferred Warranty.  
Please consult with our sales for detailed agreement.

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