



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



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

**Better Performance  
Starts From Better Lighting**  
[www.aokledlighting.com](http://www.aokledlighting.com)

## > Features of SD Series

The SD Solar LED Street Light has an all-in-one design, modern appearance, and versatile features including photocell, timing, dimming, and power-saving options. It also provides a choice between microwave or PIR sensors.

- Power range: from 20W to 120W;
- One-sided monocrystalline solar panel, suitable for remote areas without electricity access, with optional bifacial panel.
- Uses LiFePO4 batteries, enduring over 2000 charge/discharge cycles for safety, compactness, and longer lifespan.
- Operates for 2-3 rainy days in intelligent mode.
- MPPT controller offers energy-saving mode with adjustable levels, extending lighting duration and auto brightness adjustment.
- Crafted from die-cast aluminum with anti-corrosion C5-grade coating.
- Highly efficient 210lm/W option, outperforming standard solar lights with lower energy consumption.
- Precision optics for efficient road lighting in various conditions, no light wastage, and ULOR = 0% to prevent up-light pollution.
- The optical systems maintains an IP65 rating for durability.
- Provides remote IoT control solutions with optional 4G or ZigBee connectivity. For details, please contact us.




### KEY ADVANTAGES

- **Monocrystalline Silicon Solar Panel**  
25 years lifespan ensures durability
- **Bifacial Solar Panel Optional**  
Conversion rate up to 21%, MOQ >100 on request
- **High Lumen Output**  
High-performance LEDs efficacy >210lm/W
- **Rotatable LED Modules**  
Enhanced precision in adjusting the illumination angle
- **Adjustable & Reinforced Bracket**  
Robust shock resistance and the flexibility for panel alignment with sunlight through free adjustments.
- **Long Lifespan Li-ion Battery & MPPT**  
Intelligent temperature control guarantees prolonged operation and safeguards battery lifespan
- **Grid Hybrid Solution Optional**  
Grid Hybrid Power optional, increased adaptability to fulfill project demands
- **Intelligent Lighting Control**  
Smart time-based lighting control, aligning with lighting requirements flexibly.




# > Photometrics Design


Lumen efficiency > 210lm/W  
achieve higher  
illumination




High Efficiency



Long Lifespan



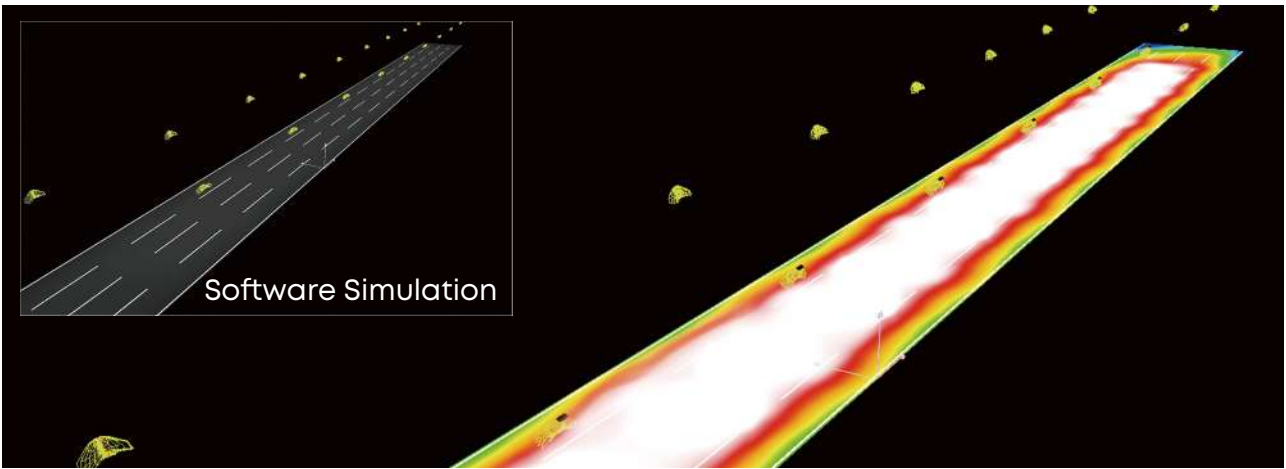
Less Calorific Value



Low Light Decay



- The light engine utilizes the latest high-efficiency LEDs and specialized optics for professional use.
- When paired with 5050 LED chips, it offers lighting solutions ranging from premium specialty lighting to cost-effective yet high-quality fixtures.



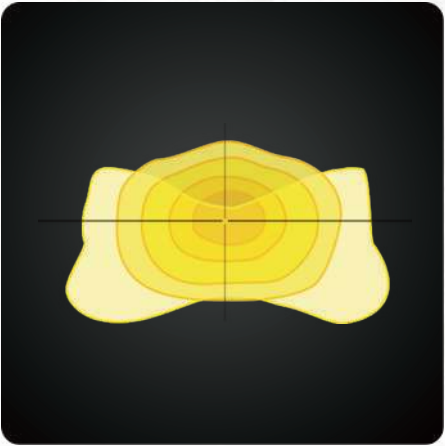
## Distribution

LED model:5050 (adjustable)

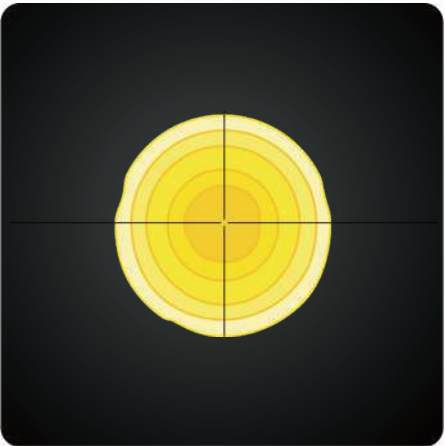
T203(20-120W)



T304(20-120W)

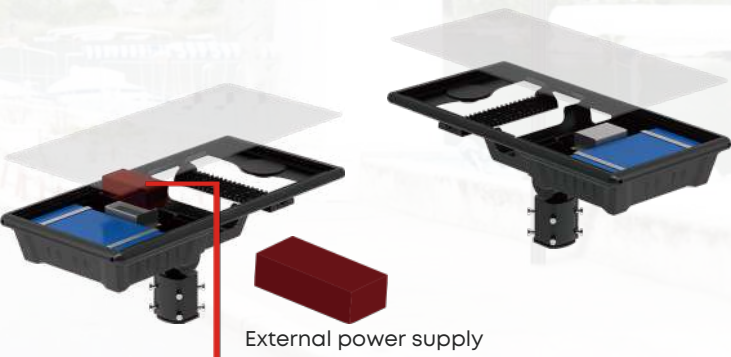


T502(20-120W)



## Hybrid Grid Power Solution Optional

For Standard Configuration Version Diagram



The Standard configuration for 20W to 80W, with the driver inside the battery box.  
The Standard configuration for 100W to 120W, with the driver placed outside the battery box.

The Hybrid Grid Power Solution offers a replaceable internal power supply, seamlessly switching between mains and battery power based on voltage thresholds. The standard setup does not include the Hybrid power feature.

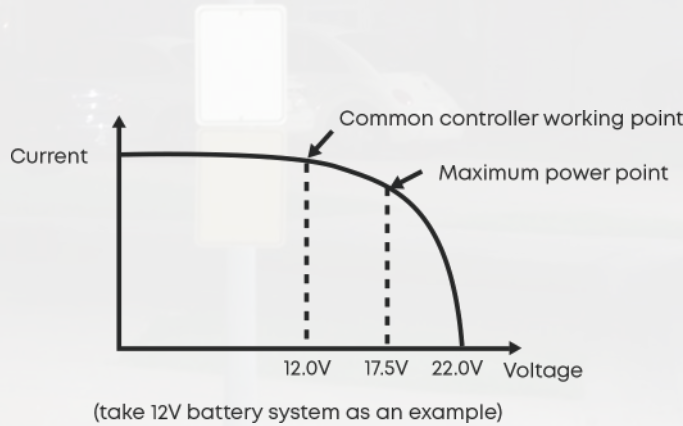


# > Application Reference

- Road & street lighting
- Residential area lighting
- Garden, parks & perimeter lighting
- Parking lot lighting
- Industrial and commercial park lighting
- Railway & station side lighting
- Riverside & jogging track lighting



## Advantages of controller

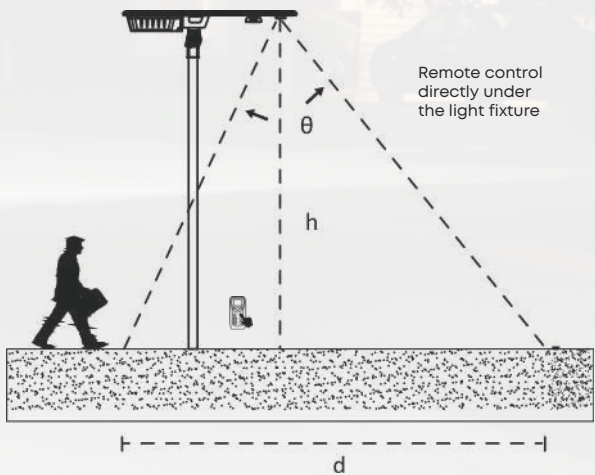


- 1) Utilizing Moving Track MPPT technology for enhanced tracking efficiency and speed, resulting in a 20%+ improvement.
- 2) Featuring UltraGreen power control technology with minimal static power consumption and sleep current.
- 3) Offering programmable load power/time control with 10 time-periods.
- 4) Supporting multiple intelligent power modes, automatically adjusting load power based on battery capacity.
- 5) Equipped with various protection functions, including battery/PV reverse connection protection, LED short circuit/open circuit/power limit protection.
- 6) Housed in durable aluminum with an IP67 waterproof rating, suitable for diverse harsh environments.
- 7) Expanding capabilities with IoT remote communication and monitoring.

## Customizable Housing Color



## Detection distance



Remote control distance is 5-8 meters, but controller sensitivity may vary due to installation height and environmental conditions; please consider the actual field.

Note: When using the remote controller, avoid placing 2 or more lights within 12 meters simultaneously, as it may disrupt reception and transmission.

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)



### Single lamp control

Control street light switch, brightness adjustment, current acquisition. Voltage acquisition, power calculation and power factor functions.



### Wireless network

From the device to the cloud, NB-IoT, GPRS, LTE and other cellular networks are used, without cabling.



### Fault management

The street light can automatically report fault information, troubleshoot faults through the platform, and query historical faults.



### Energy management

Supports online monitoring and storage of energy consumption and configuring energy saving policies.



### Intelligent monitoring

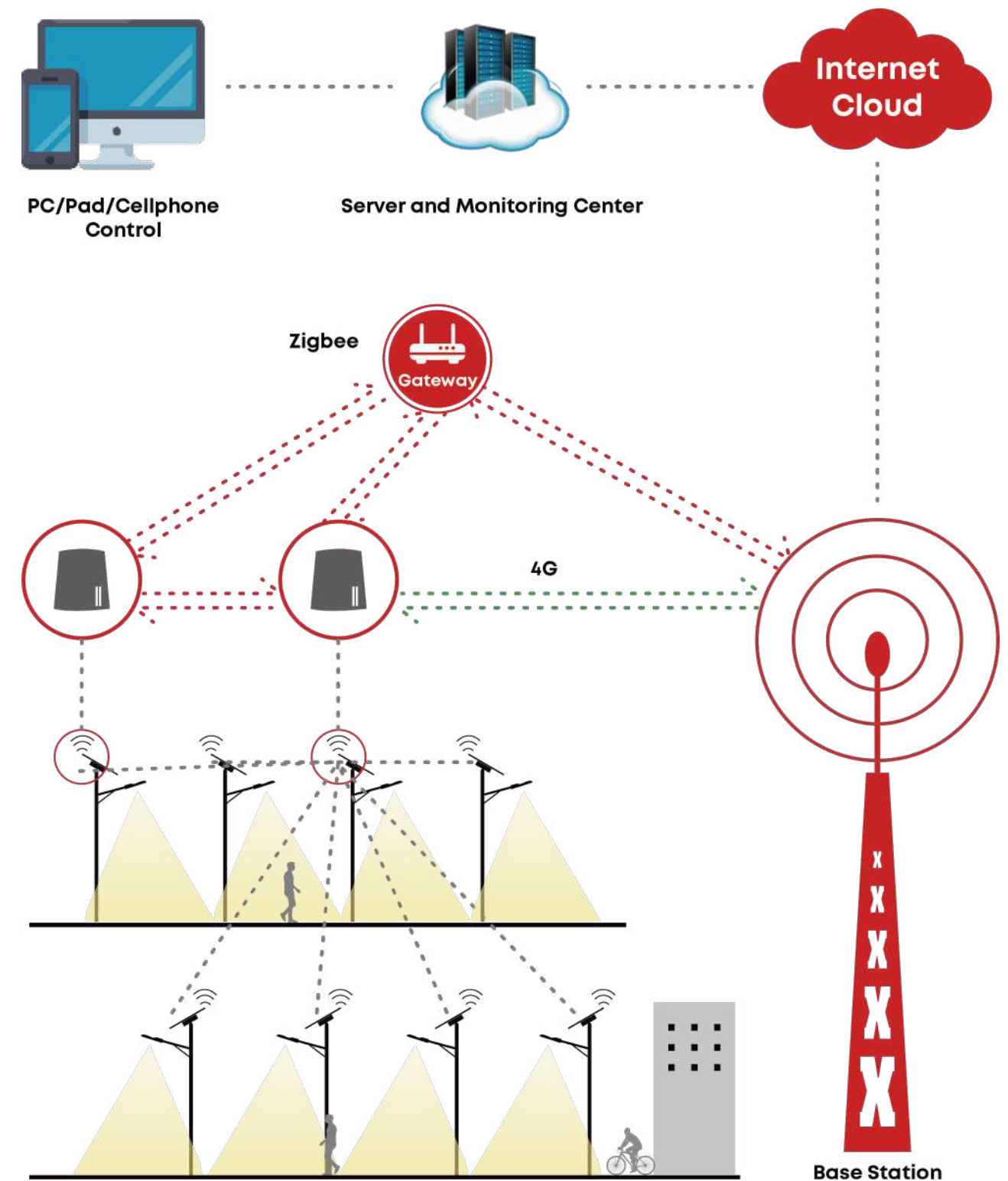
Support remote monitoring and remote control through PC web and mobile APP.



### Big data analysis

Based on the massive data of the platform, street light fault analysis and energy consumption analysis can be carried out to provide a basis for the maintenance of street light equipment to save energy and reduce consumption.

## APPLICATION OF TYPICAL IOT NETWORKING

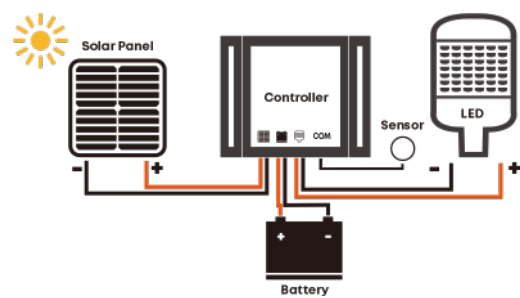




Parameter Table

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	PhotoceII sensor, Timing, dimming, intelligent power saving, microwave sensor or PIR sensor.																
Grid Hybrid power Solution(optional) Driver	Inventronics/Meanwell																
Work Mode	2H-100%; 4H-Detected: 60%, None: 20%; 6H-Detected: 40%, None: 10%																
Photometric Data																	
LED model	5050, custom on request																
Lens	Polycarbonate																
Efficacy (lm/W, Std. Dev. ±5%)@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. ±5%)@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	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 color on request, C5-grade painting.																
Mounting	Post Top																
Configuration 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, custom IOT or remote control on request																
Maximum Autonomy	Operate 2~3 rainy days under intelligent model.																
Others																	
Lifespan	L90B10 - 100000 hrs, @Tq 25°C																
Warranty	3 years as standard (Warranty extension to 5 years on request)																
Certification	CE/FCC/RoHs,For other certificates please request																
Product Size	750*366*106 mm / 29.5*14.4*4.2 inches		910*366*106 mm / 35.8*14.4*4.2 inches		1080*366*106 mm / 42.5*14.4*4.2 inches		1210*366*106 mm / 47.6*14.4*4.2 inches		1345*366*106 mm / 53.0*14.4*4.2 inches		1060*550*110 mm / 41.7*21.7*4.3 inches		1145*550*110 mm / 45.1*21.7*4.3 inches		1390*550*110 mm / 54.7*21.7*4.3 inches		
Net Weight	10kg / 22.0 lbs		12kg / 26.5 lbs		14kg / 30.9 lbs		16kg / 35.3 lbs		18kg / 39.7 lbs		20kg / 44.1 lbs		22kg / 48.5 lbs		24kg / 52.9 lbs		
Carton Size	1025*440*195 mm / 40.4*17.3*7.7 inches		1025*440*195 mm / 40.4*17.3*7.7 inches		1195*440*195 mm / 47.1*17.3*7.7 inches		1325*440*195 mm / 52.2*17.3*7.7 inches		1460*440*195 mm / 57.5*17.3*7.7 inches		1180*640*240mm / 46.5*25.2*9.5 inches		1265*640*240mm / 49.8*25.2*9.5 inches		1510*640*240mm / 59.5*25.2*9.5 inches		
Gross Weight	12kg / 26.5 lbs		14kg / 30.9 lbs		16kg / 35.3 lbs		18kg / 39.7 lbs		20kg / 44.1 lbs		22kg / 48.5 lbs		24kg / 52.9 lbs		26kg / 57.3 lbs		
Recommend installation height	3-5m		4-7m		5-7m		5-7m		6-8m		7-9m		8-10m		8-12m		
Application field	Road & street, residential area, garden, parks, parking lot, industrial and commercial parks, railway & station side, riverside & jogging track																
Storage instruction	For long-term storage, it is advisable to first fully charge the battery, then discharge it for 2 to 3 hours. This should be done every 3 months to prevent battery damage.																
Important note!	The provided information is solely for reference; the official measurement report holds higher authority.																

Working Way



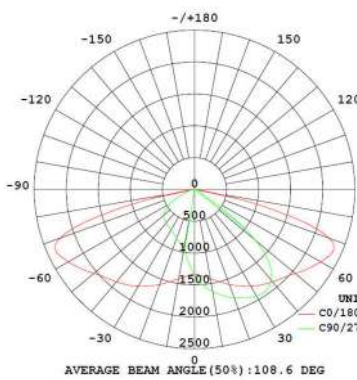
Solar panels receive sunlight during the day to generate electricity, which is charged by a controller to a battery; When the solar panel voltage is lower than the set value (rated 5V), the controller will stop charging and drive the LED to emit light. When the battery voltage is lower than the set value, 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

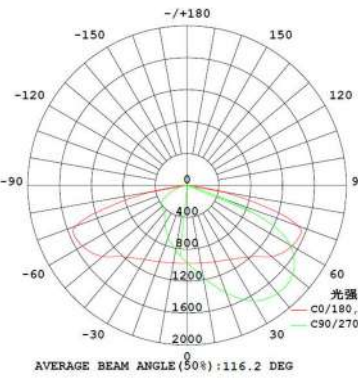
AOK									
MODEL	VOLTAGE	LED CHIPS	TYPE OF SENSOR	CCT&CRI	DISTRIBUTION	MOUNT	HOUSING	MODULE	
SD20	DC=Solar	A5=5050	00=Without Sensor	3070=3000K 70CRI	T2=TYPE II	A=Post Top	BK=Black	adjustable	
SD30	HB=Hybrid		PIR=PIR Sensor	4070=4000K 70CRI	T3=TYPE III		Custom request		
SD40	NV=Grid		MS=Microwave Sensor	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

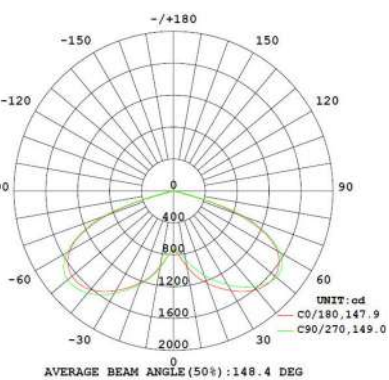
LED model: 5050 (adjustable)



T203(20-120W)



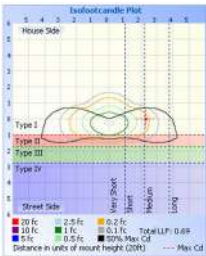
T304(20-120W)



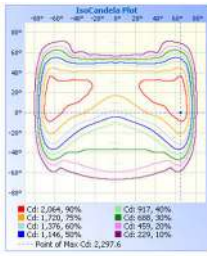
T502(20-120W)

Illuminance Diagram

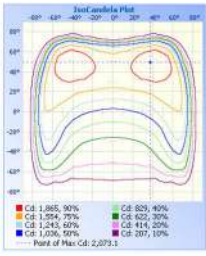
LED model: 5050 (adjustable)



T203(20-120W)



T304(20-120W)



T502(20-120W)

SD Series Specification Sheet

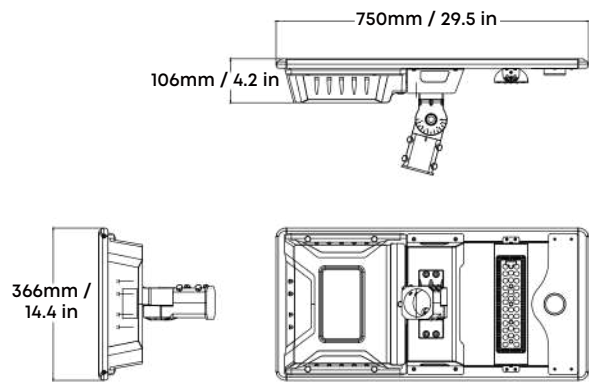
\*Due to the constant improvements in product development, individual parameters might change. Please refer to our sales or R&D team for most up-to-date content as specifications are subject to change without notice.

wally@aokledlight.com  
+1 626-986-4050 (US)  
+86 755 2357 9148 (CN)  
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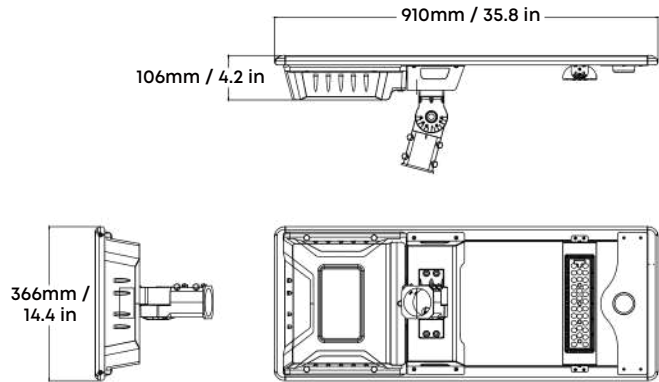


Dimensions (Adjustable module)

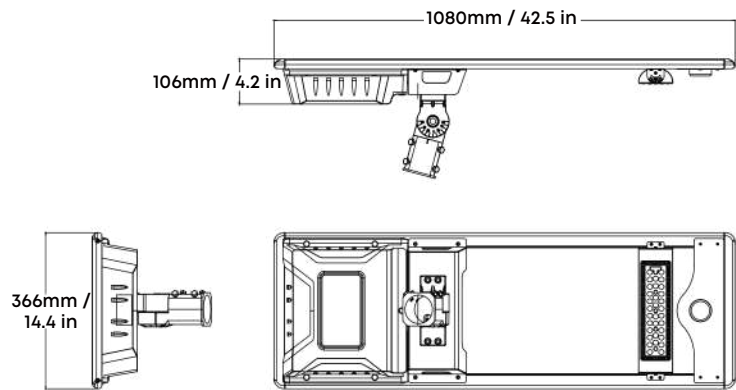
SD20-20W (LED model: 5050 ; Distribution: T2/T3/T5)



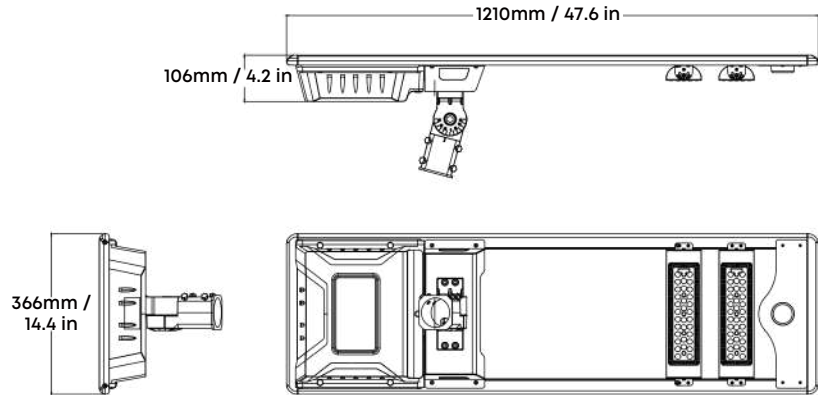
SD30-30W (LED model: 5050 ; Distribution: T2/T3/T5)



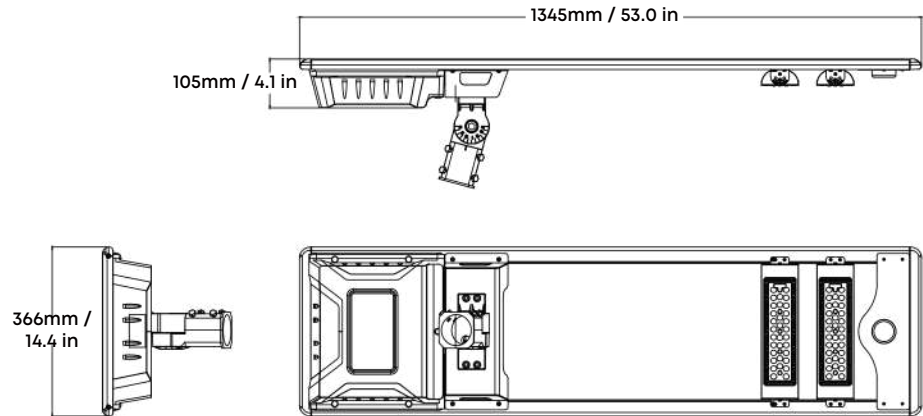
SD40-40W (LED model: 5050 ; Distribution: T2/T3/T5)



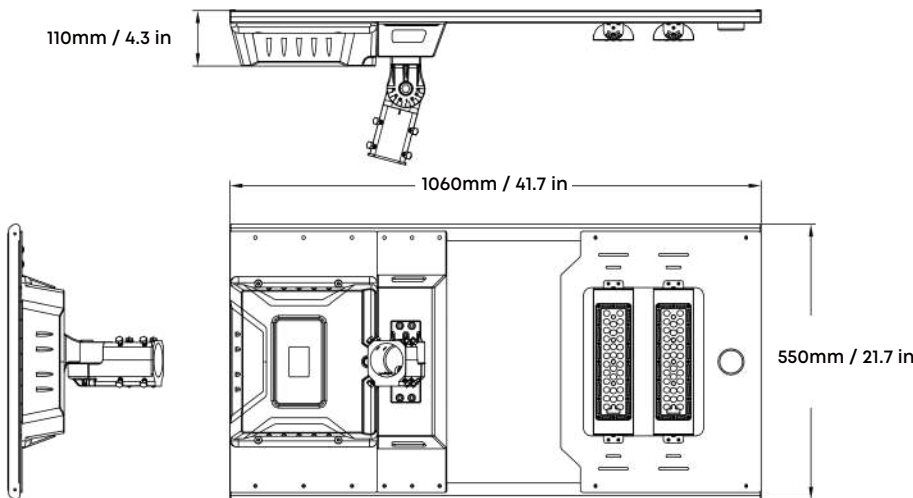
SD50-50W (LED model: 5050 ; Distribution: T2/T3/T5)



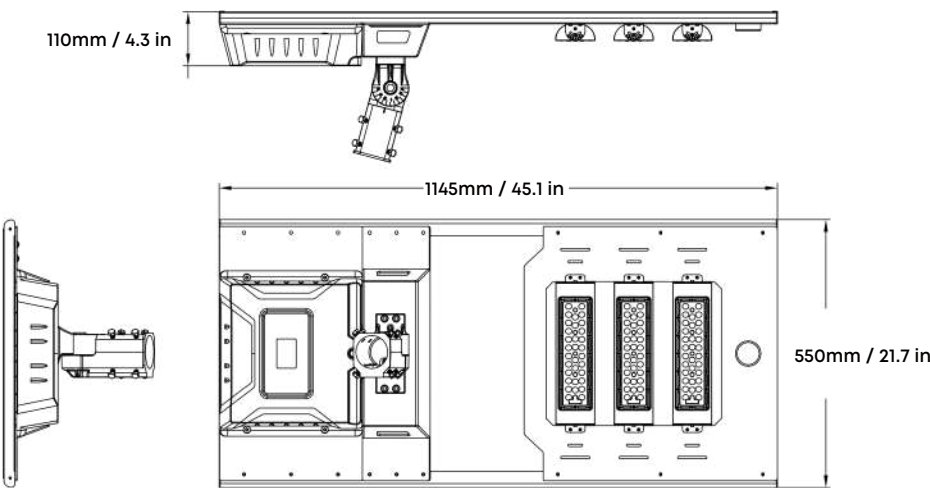
SD60-60W (LED model: 5050 ; Distribution: T2/T3/T5)



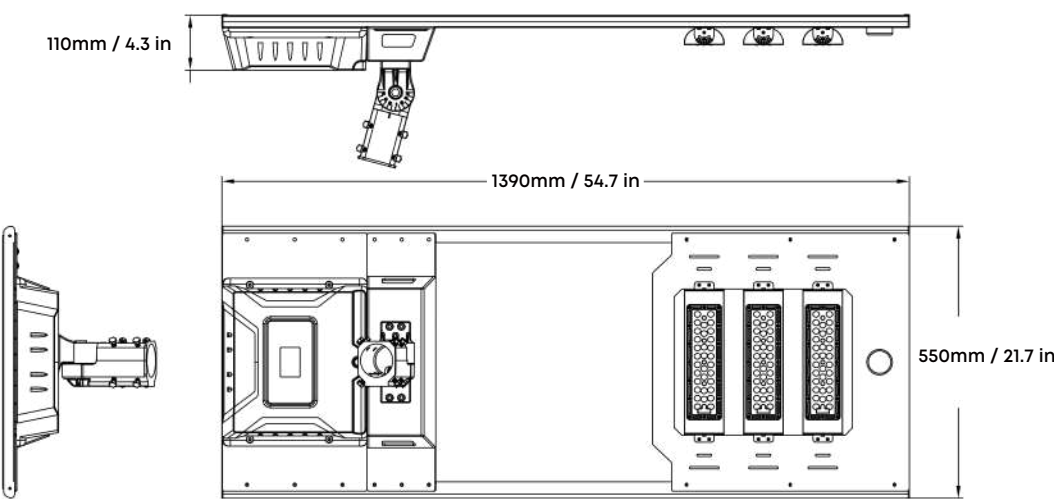
SD80-80W (LED model: 5050 ; Distribution: T2/T3/T5)



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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wally@aokledlight.com  
+1 626-986-4050 (US)  
+86 755 2357 9148 (CN)  
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# Illuminate Your Future



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

wally@aokledlight.com  
www.aokledlight.com  
+1 626-986-4050 (US)  
+86 755 2357 9148 (CN)

Manufacturing: Building 1 & 4, St. George's Science and Technology Industrial Park, Shajing Street, Shenzhen, China, 518124.  
Fuzhou HQ: Room 301, Yujing Business Center Zone 1, No. 12 Baihuazhou road, Cangshan district, Fuzhou, China, 350007  
NorthAmerica HQ: 18541 E Gale Ave, City of Industry, CA91748 USA

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