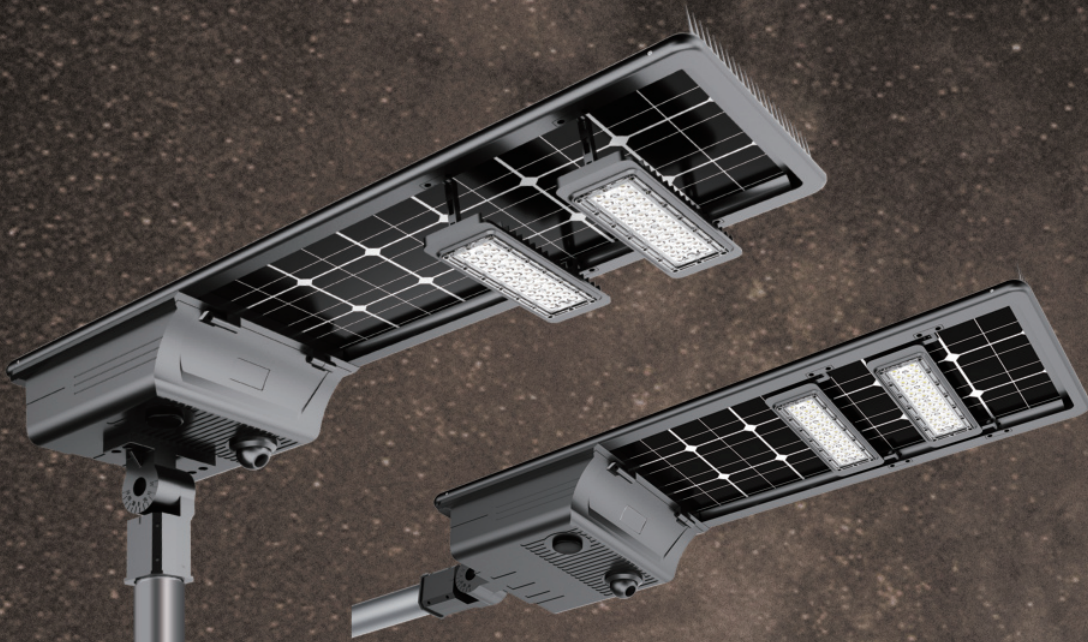# AOK®

Quality, Honesty, Service and Innovation

FCC CE RoHS

SE -SERIES

ALL IN ONE

SOLAR STREET LIGHT

UP TO **200LM/W**

- SUPPORT 12HOURS UNDER 5-7 RAINY DAYS
- POWER: 10W TO 60W

Bifacial Solar Panel
Efficiency Increased 30%

High Efficacy Lighting
60W Replace 400W Traditional Model

Rotatable LED Module
Easy Installaton

Smart Lighting Control
IOT Remote Monitoring Analysis

**EXPERTS WITH
PROFESSIONAL SOLUTION**

WWW.AOKLEDLIGHT.COM

PRODUCT DESCRIPTION

- **SE solar LED street light** features all in one design function, low profile design, with PIR/microwave motion sensor and smart controller all built in.
- **Bilateral Solar Panel** design. Suitable for remote region, non electricity supply zone.
- Deep cycle battery, charge and discharge over **2000 times**.
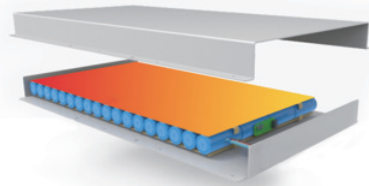- Continuously **work 5-7 rainy days in intelligent mode**.

FEATURES
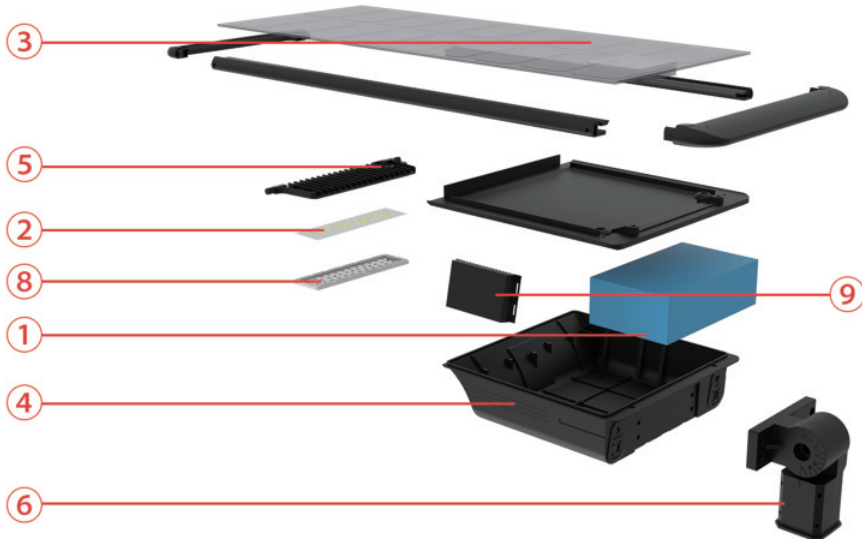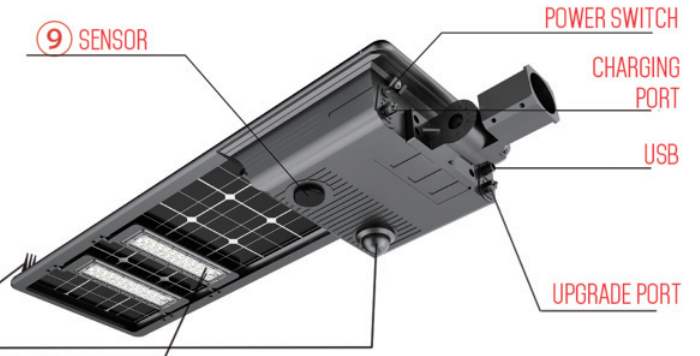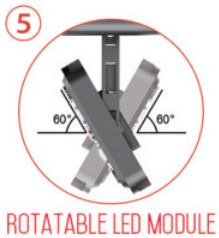
INTEGRAL MONOCRYSTALLINE SILICON SOLAR PANEL

CONVERSION RATE UP TO 30%

25 YEARS LIFESPAN

LIFESPAN CYCLE MORE THAN 2000 TIMES INTELLIGENT TEMPERATURE CONTROL

① Easy battery replacement design, can be renewed for 7 years.

② Ultra-high light efficiency, 10 watts equivalent to 20 watts of others at least.

③ Bilateral solar panels, the overall conversion efficiency is increased by 30%.

④ Unique anti-theft technology on battery door.

⑤ Rotatable LED module, worry-free installation, best solar panel angle adapt to the sun.

⑥ The various installation methods suit for any application likes light poles, wall surface and etc.

⑦ From 10 to 60 watts, can replace the traditional 35-240 watts, meeting all road application conditions.

⑧ More than 30 different optical road lighting designs, adapt to various road conditions but no waste of light.

⑨ PIR/microwave motion sensor and smart controller all built in. AC and DC complementary, also USB power and alarm supply when emergency use.

⑩ Remote system control, security camera optional.

⑤ ROTATABLE LED MODULE

⑩ SECURITY CAMERA

BIRD SCARER

⑨ SENSOR

POWER SWITCH

CHARGING PORT

USB

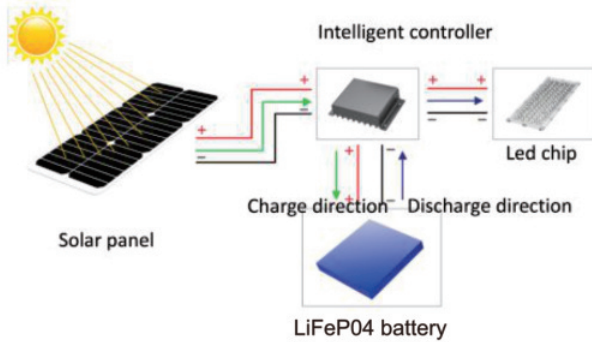UPGRADE PORT

LED CHIP

LUMILEDS

LUXEON 5050

By choosing the luxeon LED chips, single lumen value >200lm/w , with the aluminum lamp base and sealed lens，with its excellent heat dissipation，it is as if the LED chip has been placed in a sealed unit. 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 well optimized light distribution, makes for a more uniform and wider lighting area.

Philips Limitless Luxeon 5050 chip creates a first- class light source

WORKING WAY

Intelligent controller

Led chip

Charge direction   Discharge direction

Solar panel

LiFeP04 battery

Where there is light radiation, photovoltaic modules are converted to electric energy by solar radiation, and intelligent controller is used to charge electric energy into lithium iron phosphate battery. At the same time, the intelligent controller protects the overcharge and over discharge of the battery. The lighting switches and adjust lighting intelligent control, without manual operation.

HIGH-LUMEN EFFICIENCY LED MODULE

*Lumen efficiency > **200lm/w**, achieve higher illumination*

Angle of Light Source：-60°/+60°

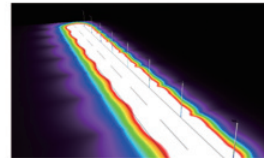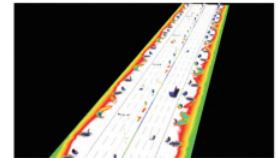High luminous efficiency   Long lifespan   Less heat   Low light decay

PHOTOMETRICS DESIGN

Planning and analyzing of street lights can be done by using lighting design software, which allows lighting simulations. It uses rendering, the process of generating an image from a model, by means of computer programs resulting in different tools for measuring the simulate light levels.
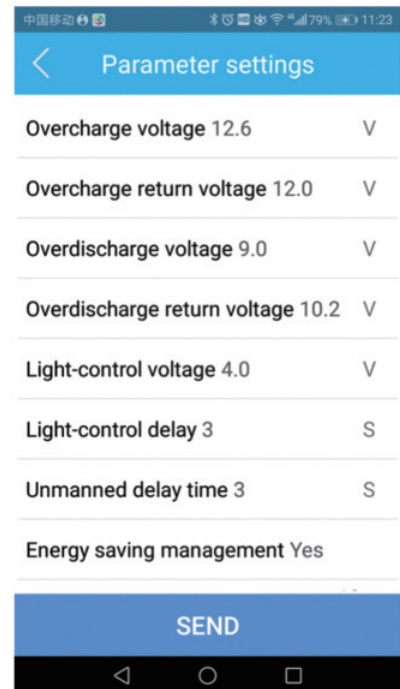
Example of
urban branch road

Example of
mian road and parking lot

MOBILE BLUETOOTH APP

CN

Solar BT

USER LOGIN

Admin login

Solar BT

Work mode   Display switch

Running information   Search Bluetooth

Parameter settings

Overcharge voltage 12.6	V
Overcharge return voltage 12.0	V
Overdischarge voltage 9.0	V
Overdischarge return voltage 10.2	V
Light-control voltage 4.0	V
Light-control delay 3	S
Unmanned delay time 3	S
Energy saving management Yes	

SEND
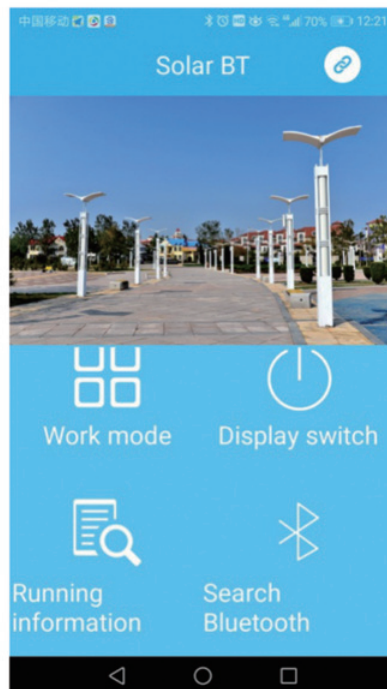
· Multiple lighting modes can be programmed remotely by Mobile Bluetooth APP Solar Street light with inbuilt Bluetooth for health monitoring with APP

SMART LIGHTING CONTROL SYSTEM
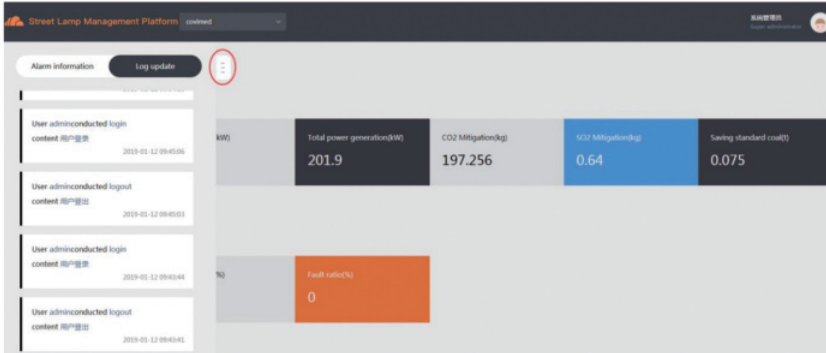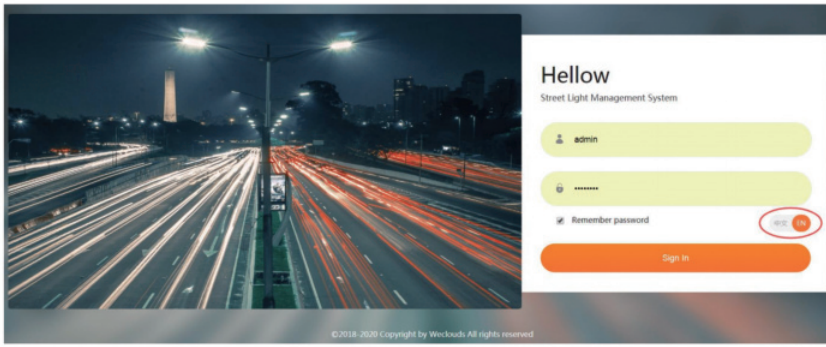
DATA & PROJECT MANAGEMENT

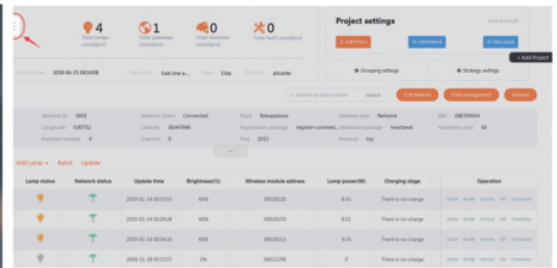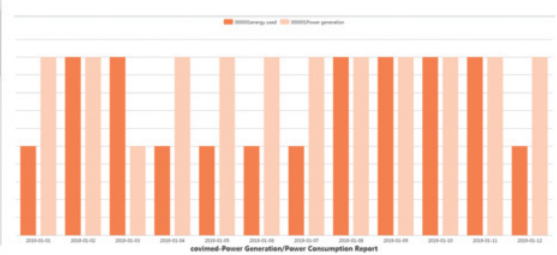· The system can pre-set one or more lighting modes according to different time of day and traffic flow, automatically turn on or off any lamp, and adjust the switching time and illumination according to environmental requirements to achieve the purpose of energy saving and consumption reduction.

IOT MANAGEMENT, INTELLIGENT LIGHTING

AOK perfectly combine traditional solar street lighting architecture Internet of things + wireless communication technology perfectly, achieve monitoring and management of remote background data, real-time understand the normal working status of each component of solar energy (street lights, photovoltaic panels, batteries, controllers), allow you to know the end customer's product usage that is thousands of miles away without leaving home, or to manage the opening and closing of street lights and the adjustment of bright spot power in a timely manner.

Remote monitoring real time monitoring

SE series with wireless communication function, through the intelligent management system of solar street lamp and wireless module, have remote monitoring and real-time monitoring.

Automatic fault alarm

Real time monitoring of solar panel voltage, current, power, battery charging and discharging current, voltage, load working state, controller working state data and fault automatic alarm.

Remote control

Support remote switch on and off dimmer and battery, load parameter modification.

Fault tracking and precise positioning

Multi peak PWM technology, suitable for partial shading or partial damage of photovoltaic cells, and the tracking efficiency is more than 99%.

Map location

Using GIS maps, with geographic display capabilities.

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3 Year Warranty
5 Year Warranty

WARRANTY

3-year standard warranty, 5-year warranty optional. Please consult with AOK sales for detailed agreement.

The Internet of Things solar street light management system is mainly composed of a street light component a centralized controller a single light controller a smart cloud platform. The centralized controller and the single light controller aggregate the data collected by the single light via the GPRS/NB-IOT wireless communication network. The centralized controller uploads data to the system cloud platform through GPRS data flow, providing data dependence for mobile phone and computer terminal access.

2G/NBIOT

INTERNET

server

Each controller is individually networked

ECS管理控制台

Base stations
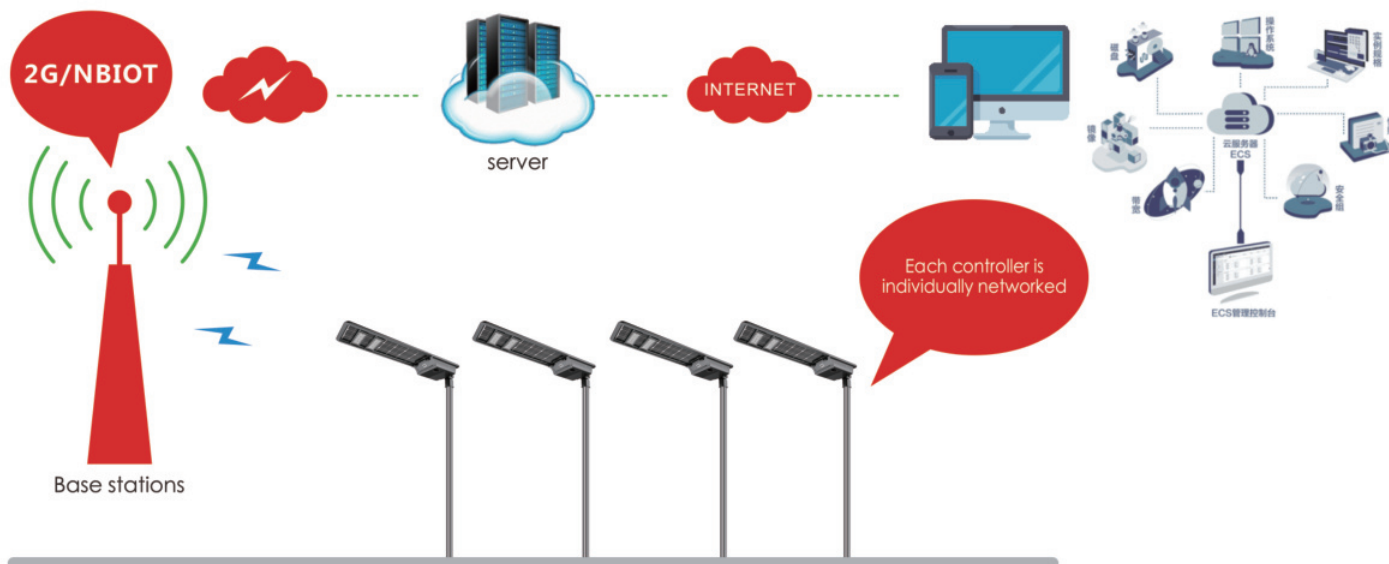
PERFORMANCE COMPARISON BETWEEN SMART IOT SOLAR LED STREET LIGHT AND TRADITIONAL STREET LIGHT

Solar led street light controller type	PWM+IOT controller	Instruction
Light decay detecting	√	Automatic light decay detection and adjusement
Charging in rainy days	√	PWM charge 3 rainy days is equivalent to a sunny day
Battery management	√	Battery lifespan management
Remote monitoring	√	Remotely monitor the status of each street light in real time
Optimize configuration	√	Through data analysis, complete the optimal configuration of solar panels and batteries in different regions
Fault alarm	√	Automatically detect system failures and alert to mobile phones or computers
Intelligent analysis	√	Automatically collect the detailed data for per light at per night, and statistical report analysis
Artificial intelligence	√	Big data collection and analysis through the system platform, complete the intelligent operation of street light and achieve stable lighting throughout the year

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TECHNICAL SPECIFICATION

- Operating time: 15 hours full power, intelligent mode 5-7 days.
- Input Voltage: 12-24V constant voltage.
- Control Mode：Light Control + Motion Sensor/Time Control/PIR Built In.
- Working Mode：30% of intensity at first 4 hrs, 100% bright when people or car pass by, then rest of time 30% of intensity, and 70% of intensity when people pass by.
- Housing：Die-Casting Aluminum, Anti-Corrosion.
- Life Hours：>50,000 hours.
- 3000K/4000K/5000K/5700K/6500K available. CRI: 70/80

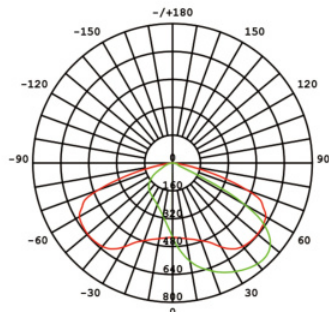### INTENSITY AUTO ADJUSTMENT

◑ 0% OR 30% POWER　　◉ 100% POWER　　◑ 0% OR 30% POWER

10W/15W　　20W/25W　　30W/35W　　40W/45W　　50W　　60W
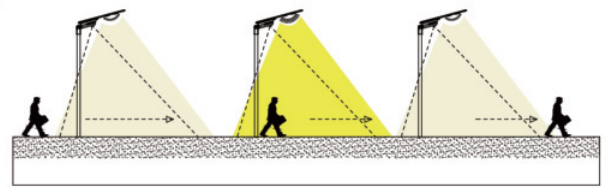
MODEL	WATTS	REPLACE MHL	LUMENS (+/-5%)	EFFICACY	SOLAR PANEL	BATTERY			OPTICAL LENS	IP & IK	INSTALLATION HEIGHT	FIXTURE DIMENSION	CARTON DIMENSION
						VOLTAGE	WATTS	CHARGING TIME					
AOK-10WsE	10W	35W MHL	2100LM	210LM/W	30W/18V	12.8V	15.6W	5.12HRS		IP65	3-6M	L633*W365*H211.4MM L24.92*W14.37*8.32INCH	L825*W190*H435MM L32.48*W7.48*17.13NCH
AOK-15WsE	15W	35W MHL	3030LM	202LM/W	30W/18V	12.8V	15.6W	5.12HRS		IP65			
AOK-20WsE	20W	60-80W MHL	4000LM	200LM/W	40W/18V	12.8V	230.4W	5.76HRS		IP65	5-7M	L793*W365*H211.4MM L31.22*W14.37*8.32INCH	L985*W190*H435MM L38.78*W7.48*17.13NCH
AOK-25WsE	25W	60-80W MHL	4950LM	198LM/W	40W/18V	12.8V	230.4W	5.76HRS		IP65			
AOK-30WsE	30W	90-120W MHL	6060LM	202LM/W	50W/18V	12.8V	307.2W	6.14HRS	65*150° /75*160° /90*100° /120°	IP65	5-8M	L948*W365*H211.4MM L37.32*W14.37*8.32INCH	L1140*W190*H435MM L44.88*W7.48*17.13INCH
AOK-35WsE	35W	90-120W MHL	7070LM	202LM/W	50W/18V	12.8V	307.2W	6.14HRS		IP65			
AOK-40WsE	40W	120-160W MHL	8120LM	203LM/W	60W/18V	12.8V	384W	6.40HRS		IP65	6-9M	L1103*W365*H211.4MM L43.43*W14.37*8.32INCH	L1295*W190*H435MM L50.98*W7.48*17.13INCH
AOK-45WsE	45W	120-160W MHL	9000LM	200LM/W	60W/18V	12.8V	384W	6.40HRS		IP65			
AOK-50WsE	50W	160-200W MHL	9900LM	198LM/W	70W/18V	12.8V	460.8W	6.58HRS		IP65	6-10M	L1263*W365*H211.4MM L49.72*W14.37*8.32INCH	L1455*W190*H435MM L57.28*W7.48*17.13INCH
AOK-60WsE	60W	160-200W MHL	12000LM	200LM/W	80W/18V	12.8V	537.6W	6.72HRS		IP65	7-12M	L1263*W365*H211.4MM L49.72*W14.37*8.32INCH	L1610*W190*H435MM L63.39*W7.48*17.13INCH

ORDERING INFORMATION

AOK － [ ] － [ ] － [ ] － [ ] － [ ] － [ ] － [ ]

WATTS	VOLTAGE	LED CHIPS	TYPE OF SENSOR	CCT&CRI	DISTRIBUTION	MOUNT	OPTION
10WsE	DC=12-24V	L5=LUMILED 5050	00=Without Sensor	3070=3000K 70CRI	120D=120DEG	Type A	4KV
15WsE			SN=Motion Sensor	3080=3000K 80CRI	T2=TYPE 2	Type B	(Surge Protector)
20WsE			(up to 9M)	4070=4000K 70CRI	T3=TYPE 3	Type C	Intelligent APP control
25WsE			DV=Dimmable	4080=4000K 80CRI	T4=TYPE 4	Type D	IOT Management
30WsE			PIR(up to 7M)	5070=5000K 70CRI		Type E	AC & DC complementary
35WsE				5080=5000K 80CRI			USB power
40WsE				5770=5700K 70CRI			Alarm
45WsE				5780=5700K 80CRI			Security camera
50WsE				6570=6500K 70CRI			
60WsE				6580=6500K 80CRI			

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3 Year Warranty　**5** Year Warranty

⊙ WARRANTY
3-year standard warranty, 5-year warranty optional. Please consult with AOK sales for detailed agreement.

PHOTOMETRY

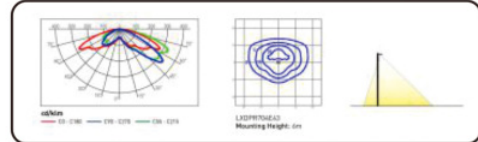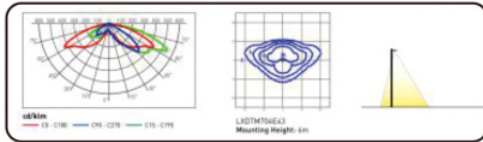AVERAGE BEAM ANGLE(50%):108.3DGE
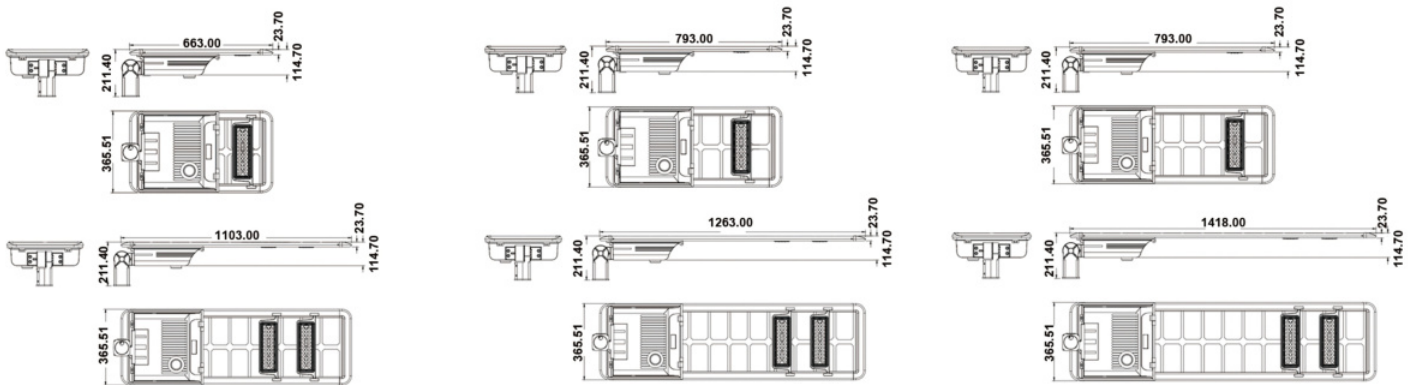UNIT: cd

— C0/180,151.7° Io:426.3
— C90/270,64.9° Io:759.2
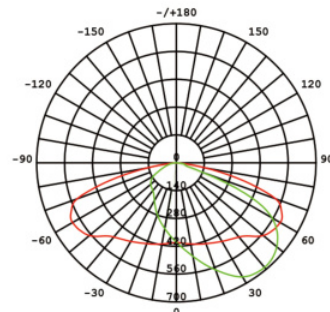
AVERAGE BEAM ANGLE(50%):116.3DGE
UNIT: cd

— C0/180,157.2° Io:399.6
— C90/270,75.4° Io:687.3
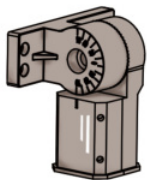
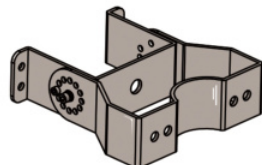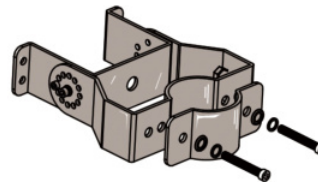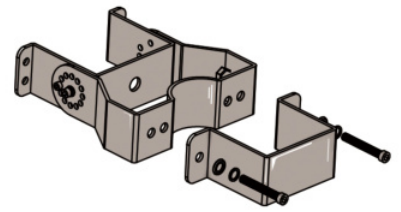| Type 2 for street lighting,cycle paths and footpaths	Type 3 for street light and car parks

DIMENSIONS

BRACKET OPTIONS

Type A
Universal Bracket

Type B
Wall Mount

Type C
Round Pole

Type D
Square Pole

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3 Year Warranty   5 Year Warranty

WARRANTY

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APPLICATIONS

AOK®

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3 Year Warranty **5** Year Warranty

WARRANTY
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