

SOKOYO[®]



AURA
KY-E-LG Version 2022 1.0
ALL IN TWO SOLAR STREET LIGHT



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KY-E-LG DC

High-quality craftsmanship, integrated design, beautiful appearance;
 Modular design for easy installation and maintenance;
 Patented integrated power module design, easy to install and replace;
 Portable hinge screw fixation, free-hand operation, no tools required;
 The bat-wing light distribution design provides uniform light distribution.

Appearance Patent Number: 202230119179.8
 Utility Model Patent Number: 202220775708.4

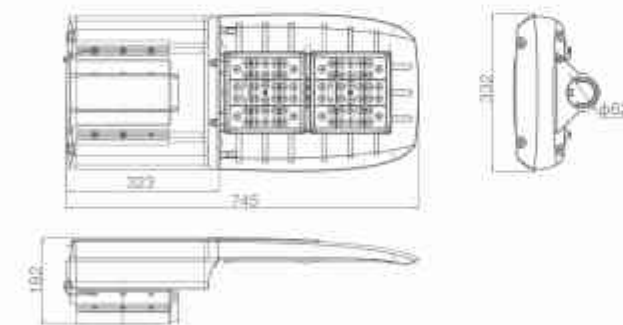


TECHNICAL PARAMETER

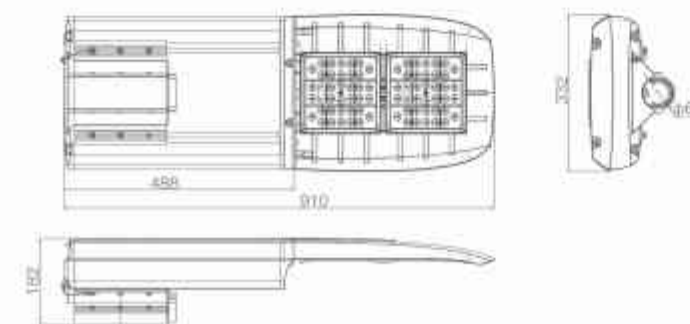
Product Models	KY-E-LG-001	KY-E-LG-002
Rated Power	80W	80W
Light Source	DC24V	DC24V
Lithium Battery	25.6V/30AH	25.6V/42AH
Solar Panel	Monocrystalline:180W/36V	Monocrystalline:240W/36V
Type of Light Source	3030/5050/7070	3030/5050/7070
Light Distribution Type	Bat-Wing light distribution(150°x85°)	Bat-Wing light distribution(150°x85°)
Light Efficiency	>160LM/W	>150LM/W
Color Temperature	3000K/4000K/5000K/5700K	3000K/4000K/5000K/5700K
CRI	≥Ra70	≥Ra70
IP Grade	IP65	IP65
IK Grade	IK08	IK08
Working Temperature	-10℃~+60℃	-10℃~+60℃
Working Humidity	10%-90%	10%-90%
LED Lifespan	>50000H	>50000H
Controller	15A	20A
Mounting Diameter	φ60mm	φ60mm
Lamp Dimension	745 x 332 x 182 mm	910 x 332 x 182 mm
Suggested Mounting Height	6m/8m	8m/10m
Lamp Weight	16.0kg	18.4 kg
Package Dimension	805 x 390 x 240 mm	970 x 390 x 240 mm

LAMP DIMENSION

KY-E-LG-001



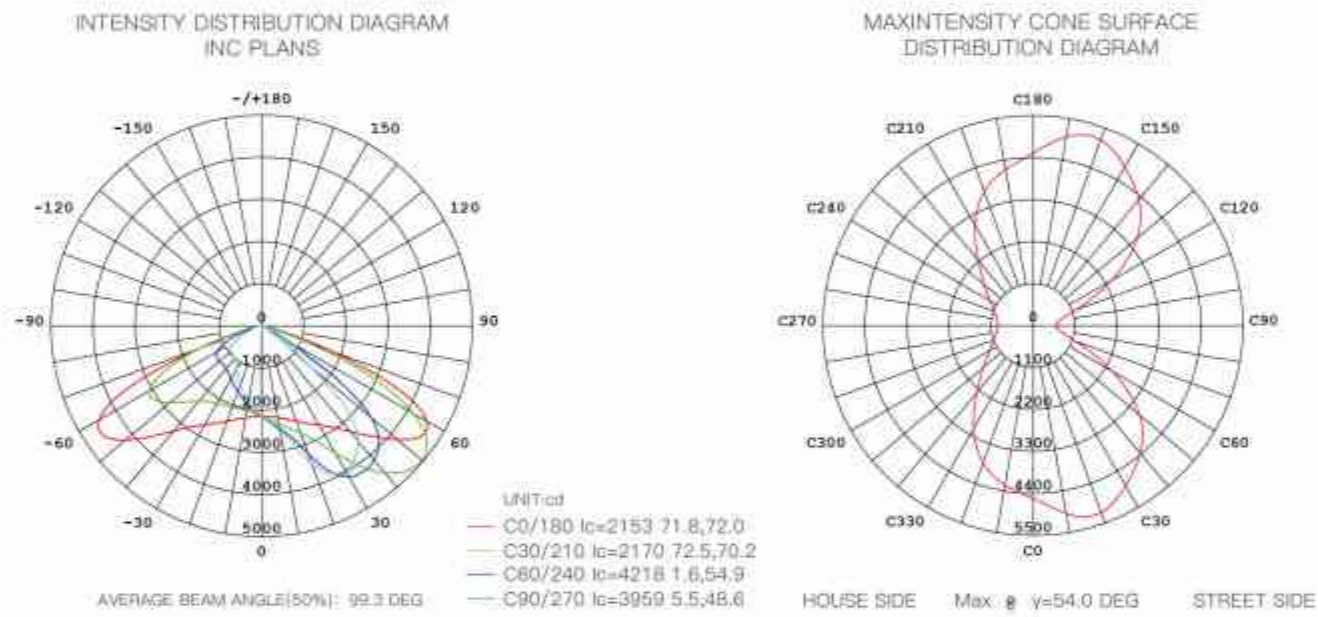
KY-E-LG-002/KY-E-LG-003



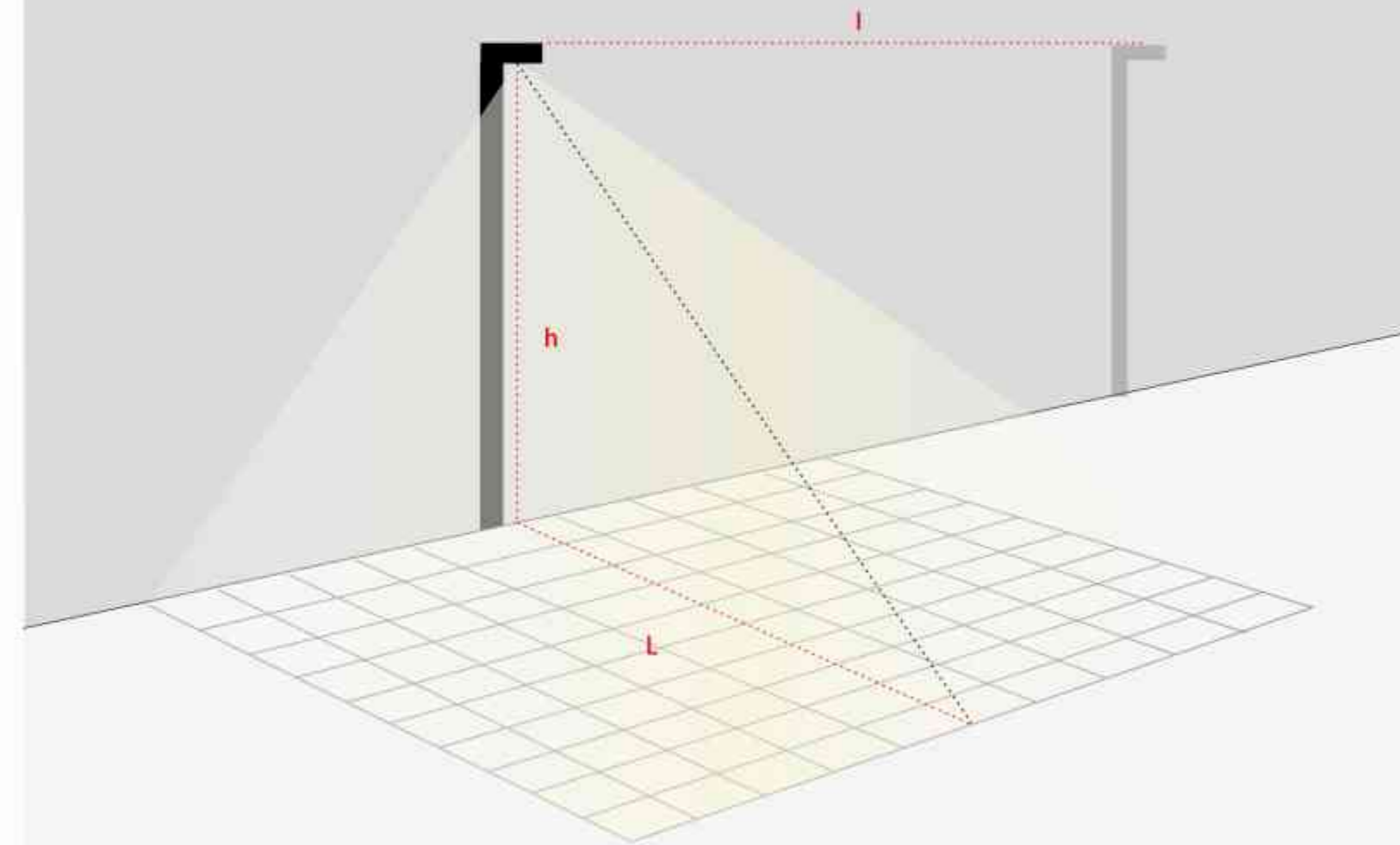
LED PARAMETER

Street Light Intensity Test Report(60W Parameter)

DATA OF LAMP		PHOTOMETRIC DATA		Eff:181.04lm/W	
MODEL	KY-E-LG-001	Imax (cd)	5212	η street up (%)	0.0
NOMINAL POWER (W)	60	LOR (%)	100.0	η street down (%)	59.5
RATED VOLTAGE (V)	48	TOTAL FLUX (lm)	10862	η house up (%)	0.0
NOMINAL FLUX (lm)	10862.2	MAXIMUM θ (C, γ)	20°, 54.0°	η house down (%)	40.5
LAMPS INSIDE	1	η up (%)	0.0	76 FLASHAREA (m²)	0.00100
TSET VOLTAGE (V)	43.34	η down (%)	100.0	STL	17.913

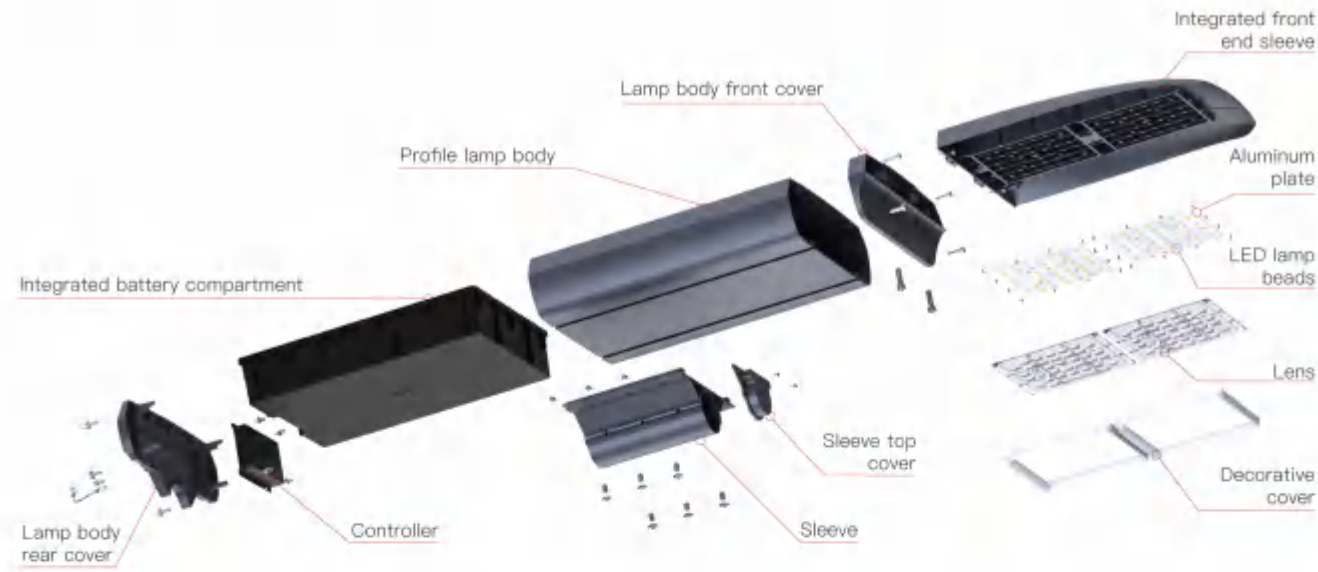


LIGHT GUIDE



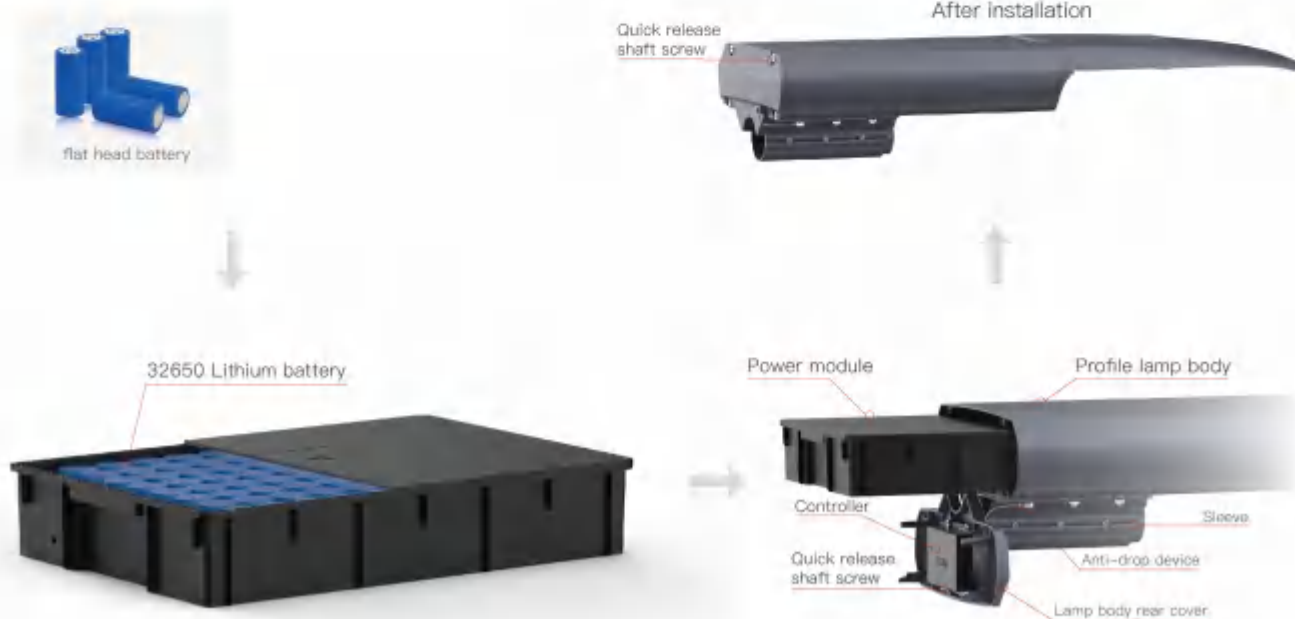
D=distance to height ratio (L/h)
 h=height of light pole
 l=pole distance
 L=width of lighting area

STRUCTURE DISPLAY



Integrated power module design:

Utility model patented product: Portable integrated power module, using high-strength plastic. The fixed battery is not easy to loosen, and protects the internal structure of the battery; both soft pack batteries and flat-head batteries can be installed; The top cover adopts quick-release shaft screws and is divided into modular design, which is convenient and quick to install and maintain without tools.



SHOW DETAILS

• Integrated heat dissipation front cover

The integrated design of heat dissipation combined with end caps ensures the heat dissipation effect and high appearance, saves installation steps, and is easy to install.



Batwing Lens

The latest patented light source technology, through the special structure of the lens, realizes the light emitted by the light source to form a bat wing shape, achieves the best uniform illumination, and improves the lighting effect.



Sleeve chute + screw double fixation

Sleeve chute + screw double fixation. The custom sleeve and the profile lamp body are fixed by double fixing design. After the chute is inserted, it is fixed by external hexagon screws, which increases firmness and it's safe and reliable.



Smart Controller

The built-in intelligent controller module can stabilize the voltage and limit the current, intelligently monitor the battery voltage, and effectively protect the lithium battery pack.



Anti-drop device design

The rear end cover of the lamp body is fixed on the profile lamp body by the drop device to prevent accidental falling during installation and maintenance and ensure the safety of personnel.



Quick release shaft screw design

Fast-release shaft screws are used for fixing, which can be disassembled manually and without tools. It is easy to repair and maintain, and the operation is convenient and simple.



High pressure cast aluminum lamp body

It is formed by ADC12 high pressure die-casting aluminum, which is impact-resistant and corrosion-resistant. The surface is electrostatically sprayed after shot blasting.



• IP65



• IK08

• Protection class

IP65: Dust tightness can completely prevent the intrusion of foreign objects, and can completely prevent the intrusion of dust, prevent the intrusion of sprayed water, and prevent the water sprayed from the nozzle from entering the lamp and causing damage;

IK08: withstand 5J impact force (equivalent to a 1.7KG object from a height of 300mm drop impact on the surface).

SMART SYSTEM

Rechargeable lighting power control system:

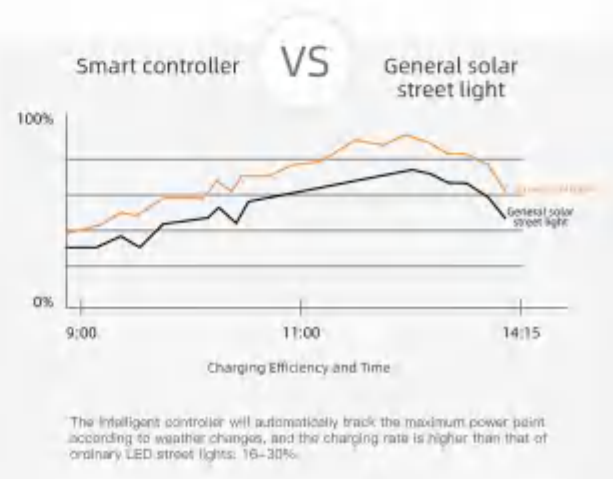
Photovoltaic MPPT charging lighting power supply controller adopts high MOSFET pre-drive circuit design to improve the charging and discharging efficiency.

The product has the following characteristics:

1. Colloidal/tamary/lithium iron phosphate batteries can be used;
2. With battery low voltage self-activation function to ensure normal charging under the condition of battery feeding;
3. It can automatically adjust the output power of the load according to the remaining capacity of the battery to prolong the use time;
4. The constant voltage output to the load can be set to output mode such as normally open/timing/light control;
5. With dormancy function, it can effectively reduce its own loss;
6. With multiple protection functions, it can effectively protect the product from damage in a timely and effective manner when the load is open or short-circuited, system overcurrent, overvoltage and overtemperature, and the LED indicator will give a prompt;
7. Fully waterproof design, the protection level reaches IP67;
8. With real-time data, current data, historical data and other parameters to view.



- Remote control
- Check battery status
- View charging history
- Set up different running time periods
- Problem diagnosis



INTELLIGENT CONTROL SYSTEM

100% use of solar energy, no fossil fuel consumption, no air pollution

Operating mode

PS: The smart system will be prioritized by setting

☀️ ☀️	🌙 ⭐	🌙 ⭐	🌙 ⭐	OFF TIME	🌙 ☀️	☀️ ☀️
Working hours 1	Working hours 2	Working hours 3		Dawn time		
Time range: 0-15h	Time range: 0-15h	Time range: 0-15h		Time range: 0-15h		
Default time: 4 hours	Default time: 4 hours	Default time: 4 hours		Default time: 0h		
Power Range: 0-100%	Power Range: 0-100%	Power Range: 0-100%		Power Range: 0-100%		
Default brightness: 100%	Default brightness: 70%	Default brightness: 50%		Default brightness: 30%		
Common way of working: Working hours can be divided into three time periods. Each working time can be adjusted to 0-15 hours, and the power can be adjusted 0% - 100%.				Morning Lighting Mode: The under-light controller sensor illuminates the lights before sunrise.	Smart work mode: The system can automatically adjust the expandable power to extend the battery capacity working time.	

Smart Power Regulation

The intelligent battery control system can automatically adjust the output power of the lamp according to the battery storage capacity, effectively prolong the working time of the lamp, and ensure the continuous operation of the solar street Light even in continuous rainy weather.



Example: When the battery is fully charged, the standard output of the lamp power (100% brightness when there is no one, 50% brightness when no one is there) When the battery storage is insufficient, reduce the output power of the lamp (50% brightness when there are people, 25% brightness when no one is there)

SOLAR PANEL

Monocrystalline solar panels:

The photoelectric conversion efficiency of monocrystalline silicon solar cells is 22.3%, which is the highest photoelectric conversion efficiency among all types of solar cells. Since single crystal silicon is generally packaged with tempered glass and waterproof resin, it is sturdy and durable, and its service life is generally up to 15-25 years.



Rated power	Rated voltage	Rated current	Open circuit voltage	Short circuit current	Width(mm)	Length(mm)	Height(mm)	Weight (kg)
90	18	5.00	21.6	5.50	680	770	30	5.90
100	18	5.56	21.6	5.89	650	680	30	6.74
120	18	6.67	21.6	7.34	680	1030	35	8.20
120	36	3.33	43.2	3.67	680	1030	35	8.20
180	18	10.0	21.6	11.0	680	1480	35	11.70
180	36	5.00	43.2	5.50	680	1510	35	12.00
240	36	6.67	43.2	7.33	1000	1330	35	15.30
360	36	10.0	43.2	11.0	1000	1970	35	22.90

Polycrystalline solar panels:

The production process of polycrystalline silicon solar cells is similar to that of monocrystalline silicon solar cells, but the photoelectric conversion efficiency of polycrystalline silicon solar cells is slightly lower than that of monocrystalline silicon, with a photoelectric conversion efficiency of 18.8%. In terms of production cost, it is cheaper than monocrystalline silicon solar cells. The material is simple to manufacture. Power consumption is saved, and the total production cost is lower.



Rated power	Rated voltage	Rated current	Open circuit voltage	Short circuit current	Width(mm)	Length(mm)	Height(mm)	Weight (kg)
75	18	4.17	21.6	4.50	670	770	30	5.60
100	18	5.56	21.6	6.00	670	1020	35	7.60
100	36	2.78	43.2	3.00	670	1020	35	7.60
150	18	8.33	21.6	9.00	670	1470	35	11.30
150	36	4.17	43.2	4.50	670	1470	35	11.30
200	36	5.56	43.2	6.00	990	1320	35	15.10
290	36	8.06	43.2	8.70	990	1960	35	22.50

APPLICATION SCENARIOS



Streets, trails, bike paths



Residential street



Commercial street, office complex



Parks, squares, amusement parks



Rural/urban road



Highways and Ring Roads

LIGHT POLE ACCESSORIES

The following is only a schematic diagram of the installation. The height and installation method of the light pole can be adjusted appropriately according to the needs of the site.



