



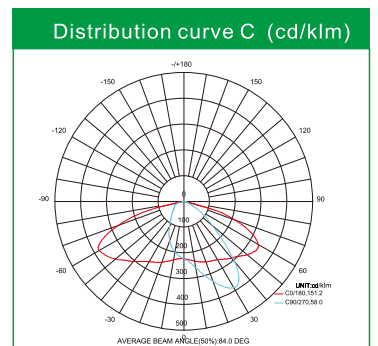
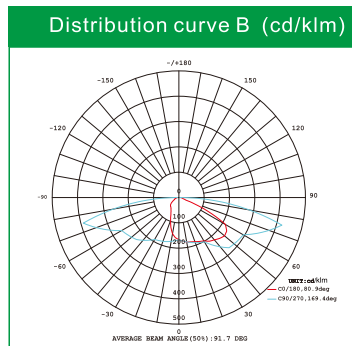
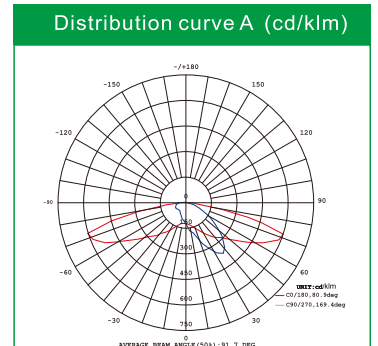
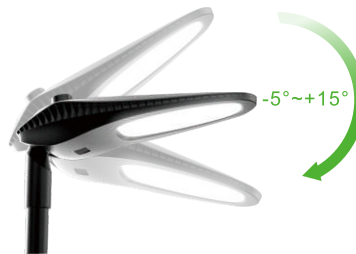
**ORO LED STREET LIGHT**

---

---



- ◆ Meet with Global market requirement and standards
- ◆ Easy for installation and maintenance, 360 degree rotatable, light sensor control available, radar sensor available
- ◆ Suitable for 40-60mm diameter pole, strengthen the stability and safety, widely used
- ◆ Advanced technology is used to improve the efficiency and lifespan(L70>100,000h @ Ta=25°C), IESNALM80
- ◆ Various light distribution curve available, compliant with EN13201-2
- ◆ Surge protection, catalogue (optional 10KV or 20KV)
- ◆ IP66, compliant with IEC60529
- ◆ Input voltage 100-277VAC, global use
- ◆ A level is added, easy for installation
- ◆ Self cleaning system, long lasting heat sink
- ◆ Power off automatically when the driver box open, more safety
- ◆ Temperature protection, when settled peak temperature is achieved, current will be decreased automatically, and when temperature is down, current will be normal again, protecting the fixture in terrible environment
- ◆ luminous decay compensation technology, ensure constant light output, improve the efficiency and lifespan, optional
- ◆ Multiple control method and sensor device available, more intelligent and convenient





Masonled are energy efficient luminaires requiring minimal maintenance. Even some maintenances can be done without tool for easily operation. With harmonious shape and aesthetic design enhances any landscape. Future offers many types high-performance photometric solutions for lighting streets, pedestrian areas, parks and bike paths.

**PEDESTRIAN AREAS**

Streets, paths and bike paths



**STREETS**

Residential streets



Shared zones, commercial streets in urban areas

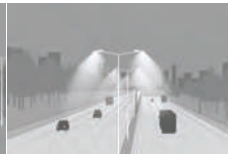


**ROADS**

Rural roads



Urban roads



Motorways and ring roads



20W-60W



70W-150W

## PHOTOMETRY

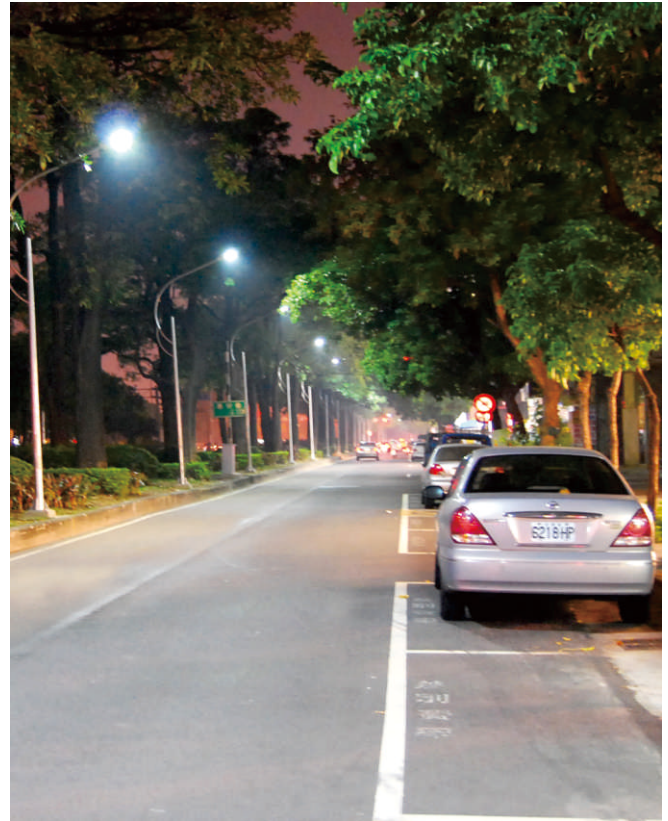
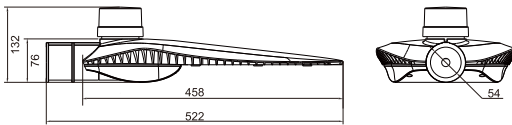
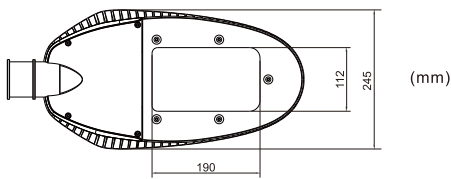
LENSOFLEX® <sub>2</sub>							
Number of LEDs	Neutral white (4000K)	8 LEDs	14 LEDs	18 LEDs	24 LEDs	28 LEDs	32 LEDs
Current: 350mA	Lab test lum (lm)	1200	2040	2400	3210	3840	4320
	Power consumption (W)	10	15	20	25	30	35
Current: 700mA	Lab test lum (lm)	2100	3360	4305	5670	6510	7560
	Power consumption (W)	20	30	40	50	60	70

LENSOFLEX® <sub>2</sub>							
Number of LEDs	Neutral white (4000K)	36 LEDs	40 LEDs	44 LEDs	48 LEDs	56 LEDs	
Current: 350mA	Lab test lum (lm)	5040	5400	5880	6360	7440	
	Power consumption (W)	40	45	50	55	60	
Current: 700mA	Lab test lum (lm)	8400	9450	10500	11550	12600	
	Power consumption (W)	80	90	100	110	120	

LENSOFLEX® <sub>2</sub>						
Number of LEDs	Neutral white (4000K)	60 LEDs	64 LEDs	68 LEDs	80 LEDs	
Current: 350mA	Lab test lum (lm)	7920	8400	9000	10200	
	Power consumption (W)	66	70	75	85	
Current: 700mA	Lab test lum (lm)	13545	14595	15540	17850	
	Power consumption (W)	130	140	150	150	



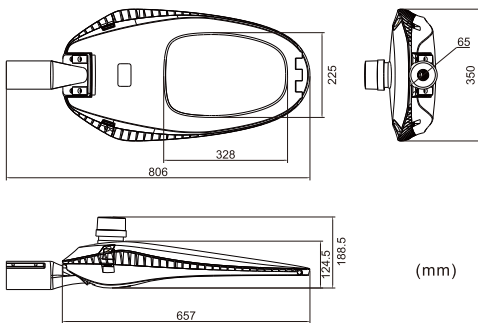
Oro LED Street Light



**Parameters**

Model	MS-ST223020	MS-ST224030	MS-ST225040	MS-ST226050	MS-ST227060
Input voltage	AC120-277V	AC120-277V	AC120-277V	AC120-277V	AC120-277V
Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Power factor	>0.95	>0.95	>0.95	>0.95	>0.95
THD	<15%	<15%	<15%	<15%	<15%
Light source	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS
Power	20W	30W	40W	50W	60W
Luminous Efficiency	>100Lm/W	>100Lm/W	>100Lm/W	>100Lm/W	>100Lm/W
Luminous Flux	>2000Lm	>3000Lm	>4000Lm	>5000Lm	>6000Lm
EPA	0.045m <sup>2</sup>	0.045m <sup>2</sup>	0.045m <sup>2</sup>	0.045m <sup>2</sup>	0.045m <sup>2</sup>
Lamp efficiency	90%				
Work temperature	-35°C ~ +50°C or -31F ~ +122F				
Work humidity	20-95% RH				
CCT	3000K 4000K 5000K				
CRI	70				
Light distribution curve	The bat wing light distribution, TYPEIII/II				
Effective illuminated area	H6 /26*8M H8/ 37*10M				
Illumination standard	ANSI/IESNA RP-8-00 CIE 140/EN 13201				
Structure description	Die-casting aluminium+Borosilicate Glass+ stainless steel fitting				
Lens	UV protection PC				
Heat sink	Integrated die-casting heat sink				
IP	IP66				
Lifespan	50000H				
Interface type	1-10V intelligent dimming interface with down power function after midnight				
Install method	Cantilevered				
Anti-electric shock rate	CLASS I				
Mounting torque	8N × M				
Safety standards	IEC60598-1 IEC60598-2 -3				
EMC standards	IEC61000-3-2 En55015 IEC61547				
LED module standards	IEC62031:2008				
Size(mm)	600*300*135	600*300*135	600*300*135	600*300*135	600*300*135

Oro LED Street Light



**Parameters**

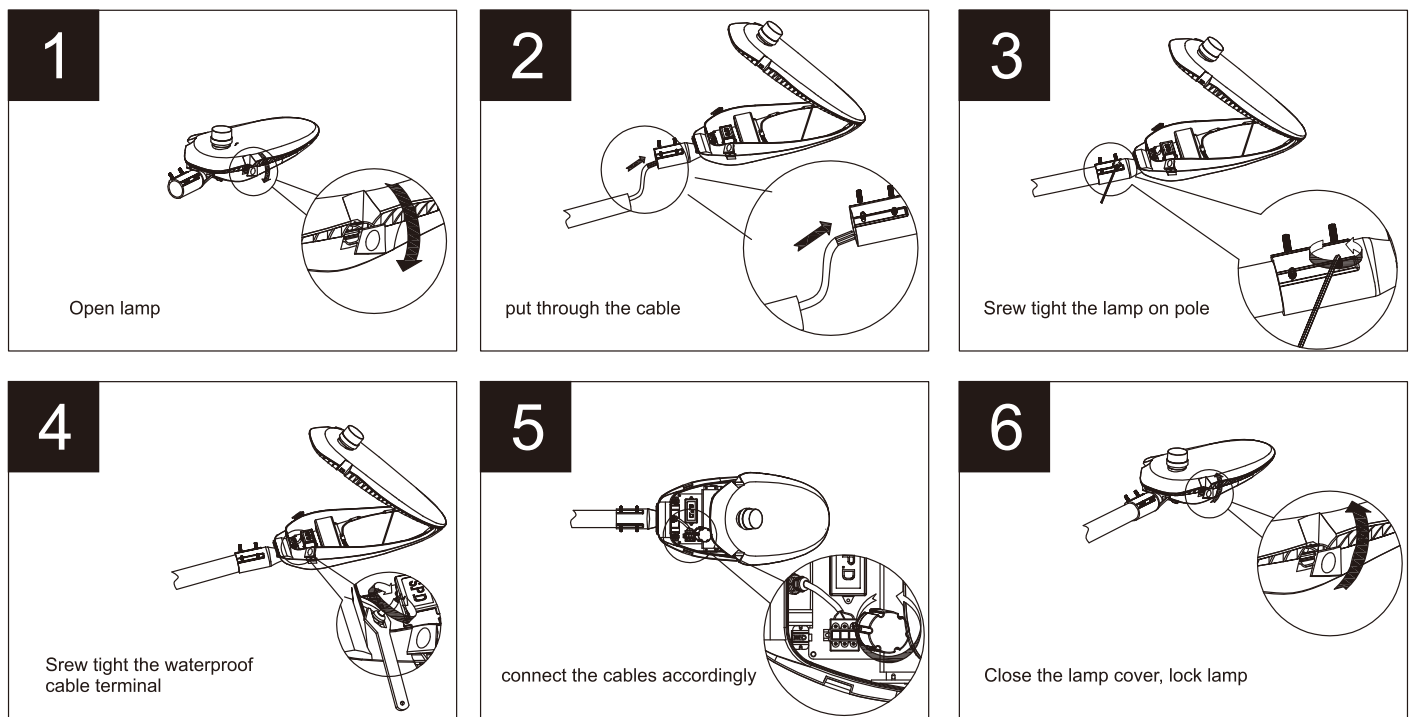
Model	MS-ST322070	MS-ST326080	MS-ST228090	MS-ST229100	MS-ST230110
Input voltage	AC120-277V	AC120-277V	AC120-277V	AC120-277V	AC120-277V
Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Power factor	>0.95	>0.95	>0.95	>0.95	>0.95
THD	<15%	<15%	<15%	<15%	<15%
Light source	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS
Power	70W	80W	90W	100W	110W
Luminous Efficiency	>100Lm/W	>100Lm/W	>100Lm/W	>100Lm/W	>100Lm/W
Luminous Flux	>7000Lm	>8000Lm	>9000Lm	>10000Lm	>11000Lm
EPA	0.052m <sup>2</sup>	0.052m <sup>2</sup>	0.052m <sup>2</sup>	0.052m <sup>2</sup>	0.052m <sup>2</sup>
Lamp efficiency	90%				
Work temperature	-35°C ~ +50°C or -31F ~ +122F				
Work humidity	20-95% RH				
CCT	3000K 4000K 5000K				
CRI	70				
Light distribution curve	The bat wing light distribution, TYPE III/II				
Effective illuminated area	H6 / 26*8M	H8 / 37*10M	H10 / 45*12M		
Illumination standard	ANSI/IESNA RP-8-00		CIE 140/EN 13201		
Structure description	Die-casting aluminium+Borosilicate Glass+ stainless steel fitting				
Lens	UV protection PC				
Heat sink	Integrated die-casting heat sink				
IP	IP66				
Lifespan	50000H				
Interface type	1-10V intelligent dimming interface with down power function after midnight				
Install method	Cantilevered				
Anti-electric shock rate	CLASS I				
Mounting torque	8N × M				
Safety standards	IEC60598-1	IEC60598-2 - 3			
EMC standards	IEC61000-3-2	En55015	IEC61547		
LED module standards	IEC62031:2008				
Size(mm)	915*410*170	915*410*170	915*410*170	915*410*170	915*410*170



**Parameters**

Model	MS-ST231120	MS-ST232130	MS-ST233140	MS-ST234150
Input voltage	AC120-277V	AC120-277V	AC120-277V	AC120-277V
Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Power factor	>0.95	>0.95	>0.95	>0.95
THD	<15%	<15%	<15%	<15%
Light source	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS	CREE/PHILIPS
Power	120W	130W	140W	150W
Luminous Efficiency	>100Lm/W	>100Lm/W	>100Lm/W	>100Lm/W
Luminous Flux	>12000Lm	>13000Lm	>14000Lm	>15000Lm
EPA	0.052m <sup>2</sup>	0.052m <sup>2</sup>	0.052m <sup>2</sup>	0.052m <sup>2</sup>
Lamp efficiency	90%			
Work temperature	-35°C ~ +50°C or -31F ~ +122F			
Work humidity	20-95% RH			
CCT	3000K 4000K 5000K			
CRI	70			
Light distribution curve	The bat wing light distribution, TYPEIII/II			
Effective illuminated area	H6 /26*8M	H8/ 37*10M	H10 / 45*12M	H12 /53*15M
Illumination standard	ANSI/IESNA RP-8-00		CIE 140/EN 13201	
Structure description	Die-casting aluminium+Borosilicate Glass+ stainless steel fitting			
Lens	UV protection PC			
Heat sink	Integrated die-casting heat sink			
IP	IP66			
Lifespan	50000H			
Interface type	1-10V intelligent dimming interface with down power function after midnight			
Install method	Cantilevered			
Anti-electric shock rate	CLASS I			
Mounting torque	8N × M			
Safety standards	IEC60598-1		IEC60598-2 -3	
EMC standards	IEC61000-3-2		En55015 IEC61547	
LED module standards	IEC62031:2008			
Size(mm)	915*410*170	915*410*170	915*410*170	915*410*170

## User Manual



## Power supply circuit

The lamp has regulations on three phase output current, requesting balance voltage, must notes as : (any one of the following circumstances produce very likely to burn out the power supply or lamp)

◆ Ensure that the AC low-voltage distribution lines using "single-minded transformer power supply, the input AC voltage can not exceed the LED lamp voltage operating range, a ban on the use of" public transformer power supply, due to public power will seriously affect the lamp power quality, voltage fluctuation, the current changes and the internal resistance of the power supply, wire resistance, especially the use of a large number of electronic products the current harmonics will be converted into voltage harmonics appear in the road lamp power distribution cabinet, there will appear serious current not balance, or a certain phase load, made into electromagnetic power supply environment is very bad.

◆ Not shared power supply line with the high pressure sodium lamp, metal halide lamp high intensity discharge lamp, because in the early stage of point lights, lamp tube first is extremely unstable arc light discharge, extremely easy to produce 2 ~ 6KV surge voltage.

◆ Power supply designed a line can not be temporary or long period of large mechanical and electrical equipment and the factory power supply, such as: electric welding machine, mixing machine, impact electric drill, lathe, punch, air pressure machine, packing machine, large type hoisting equipment, cement plant, steel making factory, extremely easy to cause the AC power grid instability



## The key notes of installation and using

A LED street lamp, a kind of electronic products which belongs to the outdoor use, put forward strict requirements on the reliability of work due to in poor working environment. According to the statistical analysis of LED street lamp failure judgment, failure of lamps in addition to the personal factors, good power supply and environment right is an very large type power supply reliability work influence on the lamp, LED lamp installation test items below and need to use the focus of attention.

### 1 Product installation instructions

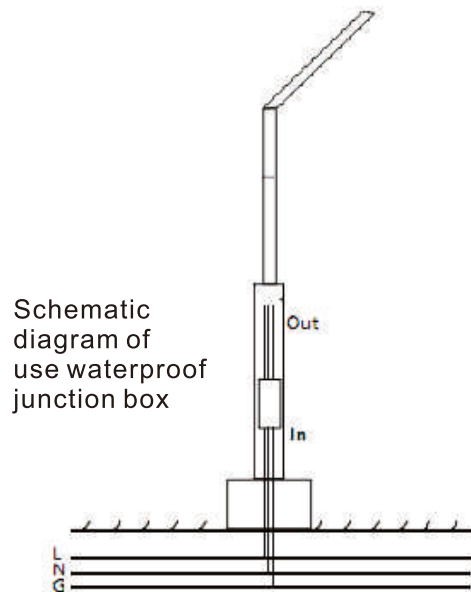
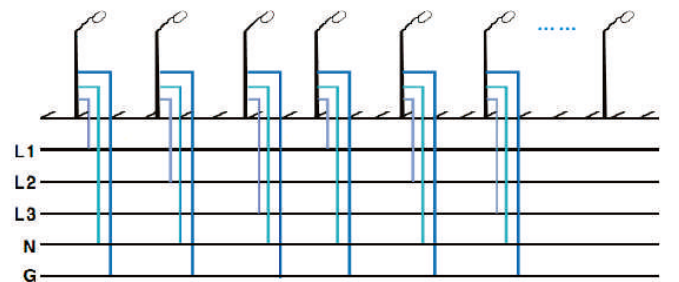
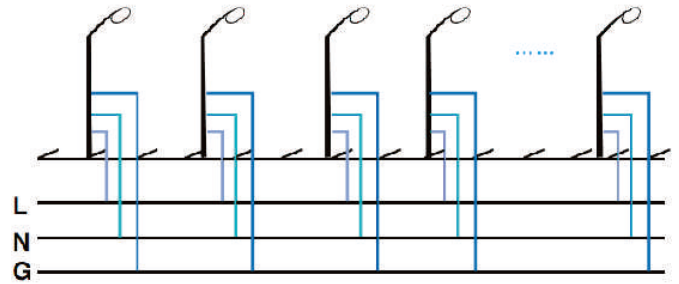
1.1 AC input line as the three core lines, respectively L, N, G test, please in accordance with specifications and electricity wiring

1.2 The power supply voltage fluctuation range cannot be more than the product use scope, demand for power supply system in the second "key" is described in the power supply system.

1.3 When installed, please make sure that the lamp wire is connected with the power grid full ground, and must ensure the effective grounding protection.

1.4 The lamps have to defend the thunder device, but under the installation, also need to add installed lightning protection device, prevent product damage caused by lightning.

1.5 LED lamp with power supply line must be as the special line, it is strictly prohibited to mix with other lines, especially not with and other high voltage high pressure sodium lamp mixed impact class



### 3 To control the load capacity and reasonable knife switch

#### 3.1 Control load capacity for each lamp

◆ In order to ensure the reliable operation of the street lamp system, from low voltage power distribution cabinet to the road lighting power distribution cabinet, if the lead wire is too long, lead inductance will be great, and the switch of the street lamp is high current instantaneous action, will be in the road lamp with electric cabinet and power saving device input inductance current mutation, sensing tip thorn surge of high pressure, the safety threat LED lamps, the installation must be controlled street lamp control every knife number, in order to avoid the heavy load.

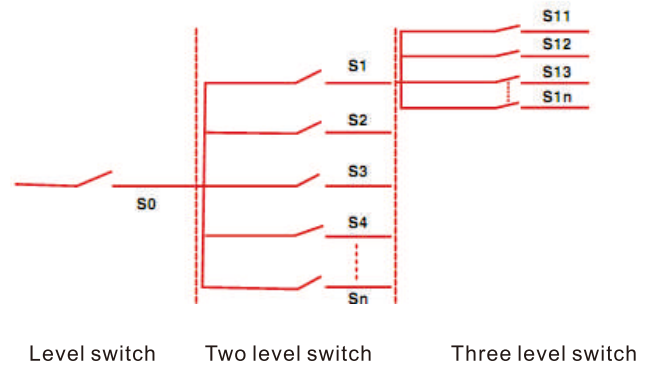
◆ The prohibition of distribution capacity and zero line, wire, distribution of contactor, air switch and other configuration, overload or near work overload 3.2 The knife on or off must be processed step by step

◆ The total switch distribution system need to set the branch switch, as shown in (Fig.4), not by a single general switch for electric line for control of all, sub switch number of much less apparent actual power supply branch and load capacity and decide, the switch blade to step on or off;

◆ Before Turn off the main switch ensure that all power supply branch switch is in off state;

◆ Turn off the main switch before gradually close the branch switch, while guaranteeing that each branch switch turn-on time interval in 5 seconds

◆ Strictly prohibited in each branch switch are in open state under the turn on the main switch or turn off the master switch, this kind of situation due to load too heavy all rushed open oscillation of graduate students, and the transformer leakage inductance is easy to self excitation oscillation, wire inductance and power saving equipment form LC oscillator and so on, the oscillation will produce tremendous energy, to form an electric current, voltage surge large low or high, easy to damage the LED lighting accessories supply or beads.



#### Turn on the lights step instructions:

Step 1: S0->S1->S11->S12->S13->S1n, until the final level of all switch on;

Step 2: S2->S21->S22->S23->S2n, until the final level of all switch on;

Step n: Sn->Sn1->Sn2->Sn3->Snn, until the final level of all switch on.

#### Turn off the light steps that:

Step 1: S0->S1->S11->S12->S13->S1n has been disconnected, to switch the last level of all disconnected;

Step 2: S2->S21->S22->S23->S2n has been disconnected, to switch the last level of all disconnected;

Step n: Sn->Sn1->Sn2->Sn3->Snn has been disconnected, to switch the last level of all disconnected.

## Transport, storage requirements

Paper packaging, Not allowed by violent mechanical impact and exposure to the sun and rain in the transport process, not inverted, to prevent a throw, tumbling, weight.

Lamp should be stored in cool, dry and clean environment, the storage temperature is  $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$ .



## Transport, storage requirements

Paper packaging, Not allowed by violent mechanical impact and exposure to the sun and rain in the transport process, not inverted, to prevent a throw, tumbling, weight.

Lamp should be stored in cool, dry and clean environment, the storage temperature is  $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$ .

## Notes

to avoid accidents and damage should carefully read the instructions before use, This product is maintenance free product and generally no need to repair . In case of to repair , please contact with us Lamp should be carefully checked before use, if unusual phenomenon happened, please contact with us When in use, it is normal to find a certain temperature rise on surface of lamps.

## Safety Warning

Must ensure that the street lamp is flawless and perfect before installation.

Do not apply force or throw the street.

Keep them in a cool, dry and clean environment, forbid into the water or fire. T do not discarded and placed in designated locations, unified treatment.