



Manual for NUALIGHT LED Street Light



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Before installing, please read the installation instructions!

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Characteristic

- ① LED Source: selection of original CREE/PHILIPS/ORSAM high power LED, which fully guarantees the light color stability and lumen maintenance.
- ② Driver: adoption of international famous brand of high-power special driver for LED streerlight with a variety of certification, which makes the reliability and stabilityof the lamps greatly improved.
- ③ Design of optical light distribution: The secondary light distribution design with independent intellectual property rights, so that the lamp spacing ratio reached 1:4y as increased in the lamp efficiency at the same time; optical lens with high light transmittance, high lighting efficiency
- ④ Radiation: new modular heat dissipation design, making use of lamps and lanterns better airflow from all directions, ensure the lamp temperature rise
- ⑤ Structure: Unique design with ultra-thin lighting weight, increase the use of safety; High strength toughened glass mask makes the fixture more easier to clean and the optical devices more durable.
Horizontal and vertical installation with -5°to 15°adjustable angles for 70W above led street models with tool free installation and maintenance design module design standard, makes the more flexibility and convenience for installation and useness. More safety for the useness if starting the automatic power off function of the electric chamber cover.
- ⑥ Protection 1: Independent waterproof structure for both power and led chip body, not only make the lamp module replacement convenient, also make the level of protection of the lamp to reach IP66.
- ⑦ Protection 2: Suitable for the use during the wide voltage from 120-277VAC; Surge protective device(10KV/10KA) provides more safety.
- ⑧ Intelligent control function:A variety of control methods and induction devices available, lamps more intelligent, more convenient to use
- ⑨ Others: Dust free self cleaning system design,prodiving more lasting efficient cooling for lamps.

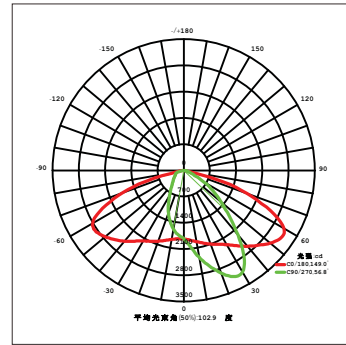
Dimension

	
Model	DIMENSION:L * W * H (UNIT:MM)
N18497	522*245*76
N18498	522*245*76

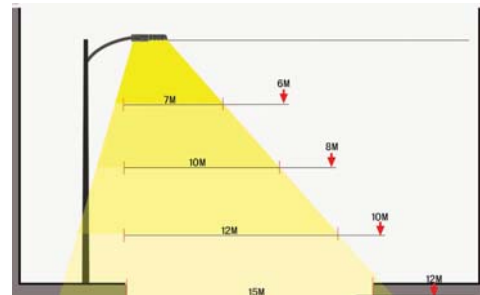
Photoelectric parameters

MODEL	N18497	N18498
INPUT VOLTAGE	120-277V	120-277V
POWER EFFICIENCY	>90%	>90%
POWER FACTOR	>0.95	>0.95
SYS. POWER	30W	60W
LUMEN	>3000Lm	>6000Lm
LIGHT DISTRIBUTION TYPE	POLARIZATION ELLIPSE	POLARIZATION ELLIPSE
LUMEN EFFICIENCY	105LM/W	105LM/W
CCT	4000K/5000K	4000K/5000K
CRI	>70	>70
IP RATE	IP66	IP66
CERTIFICATE	CE/ENEC	CE/ENEC
LIFE SPAN	>50000Hrs	>50000Hrs
NW.	3.8KG	3.8KG
PACKAGE SIZE	600*300*135	600*300*135

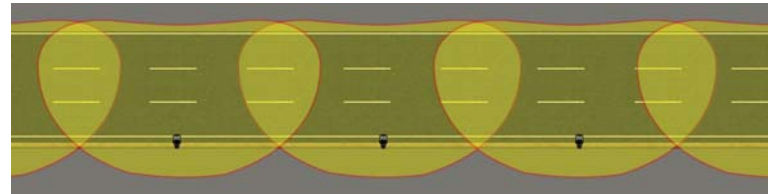
Distribution curve



Lighting effect chart



LIGHTING EFFECT DIAGRAM I



LIGHTING EFFECT DIAGRAM II

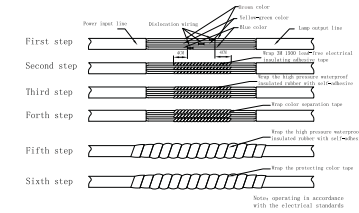
Installation Manual(I)

1. Open the packaging to check whether the product is in line with the requirements; the surface of the product is intact; The function of the product is in line with the requirements.

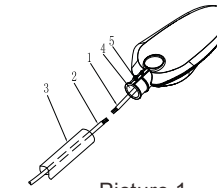
2. Installation of lamp

- 2.1 The grid line penetrates into the lamp post, the electric cable (2) and the lamp power line (1) connected (see Figure 2)
- 2.2 The grid line connected into a lamp post, lamp arm (3) penetrates the lamp arm mounting hole (4), (see Figure 3)
- 2.3 With six angle wrench locking parts (5) (see Figure 3)

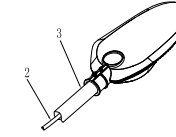
Components		
Item No.	Name	Quantity
1	Lamp power line	1pc
2	Power grid line	1pc
3	Lamp holder	1pc
4	Lamp installation hole	1pc
5	Locking screw	6pc



Picture 2

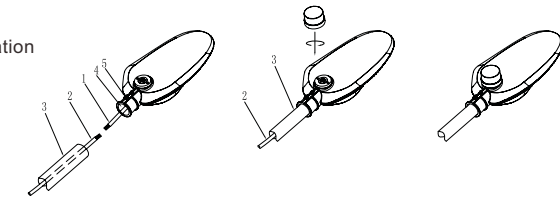


Picture 1



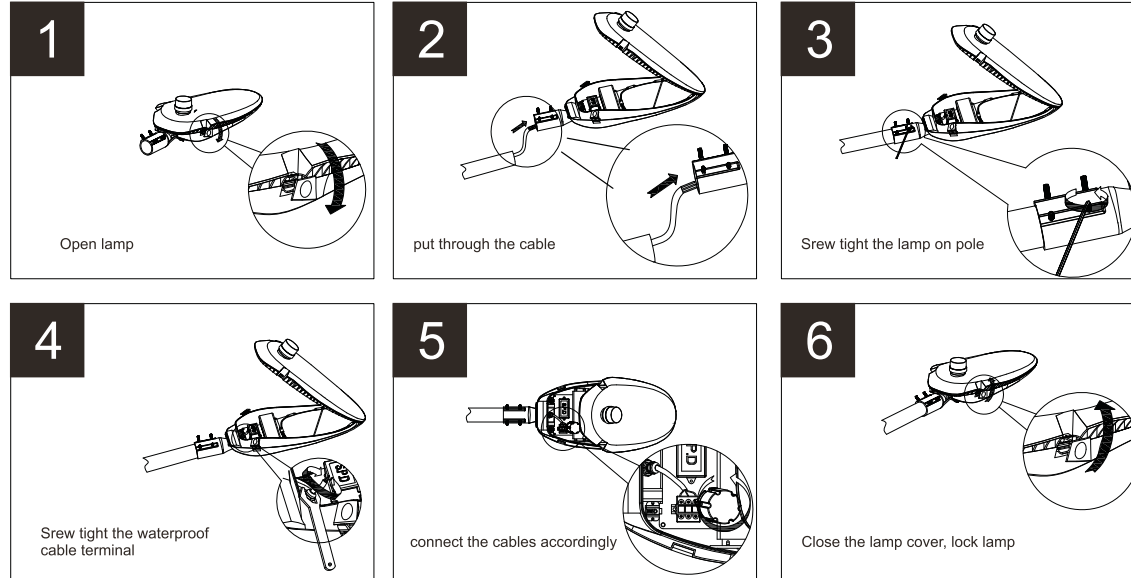
Picture 3

Installation requirements of the lamp arm& Light controller installation
The two lamp arm of the street lamp is suitable for different size (Φ50、Φ42) see offside)

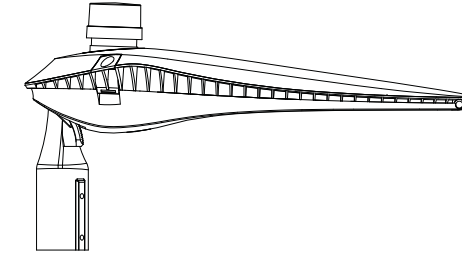


Installation Manual(II)

1. Open the packaging to check whether the product is in line with the requirements; the surface of the product is intact; The function of the product is in line with the requirements.
2. Detailed installation Manual:



3. If nertical installation, pls adjust the lamp arm as below picture shows:



Requirement for lamp arm: This led street light is suitable for different lamp arm sizes($\Phi 42 \sim \Phi 60$)

Notes of the Installation & using

LED is widely used outdoor with poor working conditions, which keeps the strict requirements for its reliability. According to the failure analysis, except for the factors from the lamp, good electricity ambient and correct installation have a great effect on the stability of the drive. Below are the precautions for the installation and using:

1 Installation Instructions

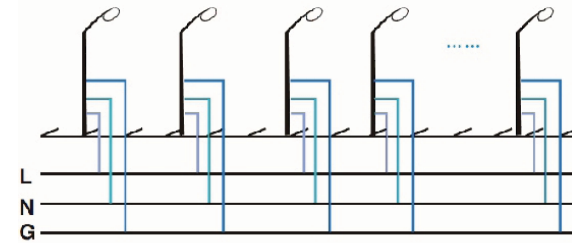
- 1.1 There are 3 lines for AC input, which are L,N,G and please wire and power the lamp according to the product specifications.
- 1.2 Voltage fluctuations from the state grid should be within the voltage range of the lamp. There will be highlights on the Item NO.2 in "Power Systems" below.
- 1.3 Please make sure that the lamp has a good connection with the ground line while installation.
- 1.4 Surge protective device is provided when buying the products from us, but lightning protection device is also needed while installation in case of the damage caused by lightning.
- 1.5 The power cord of the LED street light is must be the special line, with no other mixed cords, especially the cords of the HPS or other high voltage shock lamps.
- 1.6 Please don't expose the driver out of the lamp to reduce the damage caused by poor condition bad environment.

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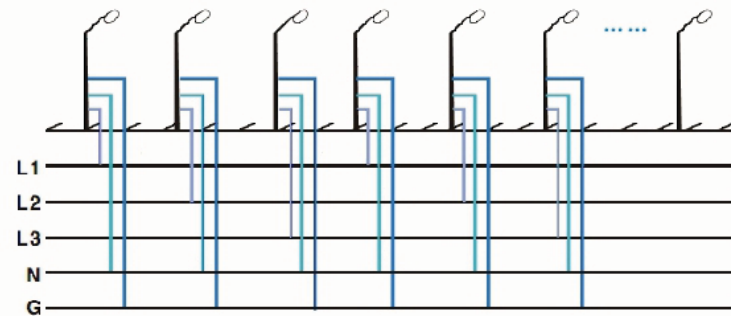
2 Power Systems

There are 3 lines for led street light, namely L line, N line, and GND. The power system of the LED lamps can be single-phase & three-phase power supply. Wiring is showed as the one in picture 1 and single-phase two-wire system is prohibited. When using three-phase power supply, TN-S system is required, namely three-phase five-wire system. The wiring is showed below in picture 2 and three-phase four-wire system is prohibited. These two power system needs to ensure that the GND is connected with the ground of the main power supply system.

Three-phase five-wire system is widely applied in most of the cases, and the electrician needs to take care of the three-phase load balancing. And if there is no balance for the three-phase load, 1) there will be huge surge current at the input terminal of the load when turn on/off the switch, (And this high current is caused by high voltage in a short time at the grid, like a wave. When large-capacity electrical equipment turns on/off, there will be surge voltage caused by the inductance in the grid, which will cause the surge current to damage the LED driver of the LEDs). The phase that is caused by low voltage may prevent the control circuit of the led lamp from being normal working state, thus affect the energy saving or the light-efficiency of the LED.



Picture 1 Wire of Single-phase three-wire system
(notice the balance of the three phases)



Picture 2 Wire of three-phase five-wire system (notice the balance of the three phases)

3 (Power lines)

LED Street Light uses three-phase output current and stable voltage, therefore the following points needs to be taken care in case that the driver & LED is damaged by them.

- ◆ Make sure that the AC line from the low-voltage distribution is provided by the specific transformer, the input AC voltage is not exceeding the working voltage range of the LED lamp. Public transformer is prohibited because of the low power quality and huge voltage fluctuation. Current harmonics, caused by the current variation and the driver resistance, will change into voltage harmonics and come to the power distribution cabinet. This sometimes leads to the unbalanced current, overload and poor electromagnatic power ambience
- ◆ Power lines shared with HPS, metal halide and other high-intensity discharge lamps is not allowed because of the unstable arc discharge in the tube at the initial phase, which can leads to surge voltage as high as 2-6KV.

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- ◆ Specific power line can not power the large electrical equipment or factories temporarily or for a long time. Like: electric welder, mixer, impact drill, packing machine, large-scale heavy equipment, cement factory, steel plant .etc. Because these machines and working conditions makes the instability of the state grid.

4 Requirements of the installation for the driver

4.1 Reliable grounding

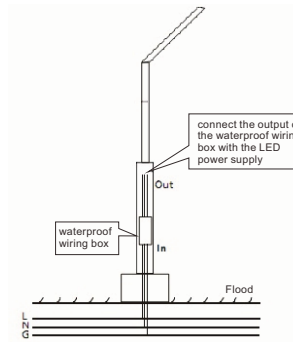
- The Led lamp and the pole needs to be reliable grounded in case of thunder shock. In order to make sure the safety of the electricity, connecting the ground line with the N-line is not allowed, and unconnected ground line of the LED lamp is also prohibited.

4.2 Connection of the power cord

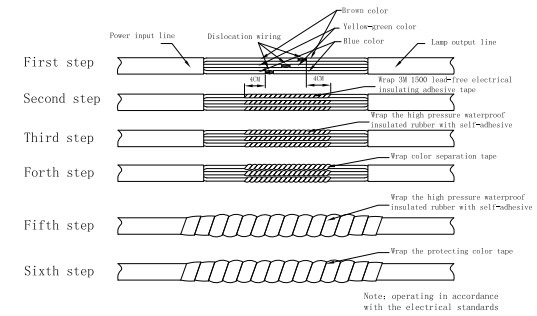
- When connect the LED lamp and the AC input, please make sure that the cord needs to be inserted into the pole and then connect the AC input of the driver. Let the connector upward and then wrap with insulation tape or waterproof junction box to prevent the connecting part from the moisture or the rain. Otherwise, there will be security risks on the one hand, and on the other hand, huge voltage fluctuation will ruin the LED and the driver. Please refer to the connection line of the picture 3 below.

4.3 Diameter requirements of the N-line

- In many cord(three-phase power supply), the diameter of the N line is small, which has a great impact on 3 pieces led street light with single-phase power supply. Because the led street light is powered by three-phase five-wire system, which requires the same diameter of A,B,C three phase line to adapt to the Schematic diagram of use waterproof junction box



Use insulation tape schematic bandage



3 Recommended connection method

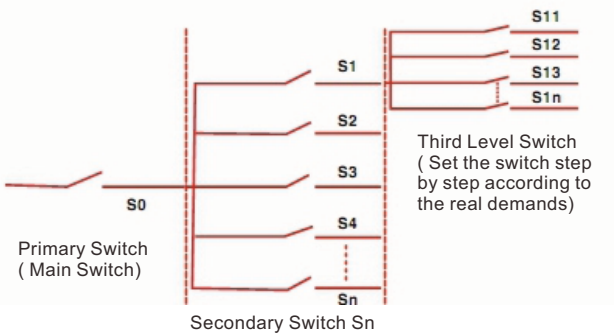
5 Control load capacity & turn on/off the switch in reason

5.1 Control the load capacity on each street line

- ◆ To ensure the LED street light work properly, from low-voltage power distribution cabinet to LED street light power distribution cabinet, if the lead wire is long ,then there will be huge lead inductance. And this is the same case for turning on/off the LED street light. This will make the sudden change of the inductance current ,which can threaten the safety of the LED street light. So when installing the LED street light, the quantity for each street light line needs to be reasonably planed in case of too much load.
- ◆ Any accessory that may caused the over load or close to full load of the LED street light is prohibited.

5.2 Turn on/off the switch step by step

- ◆ Sub-switch is needed under the main switch in the distribution system, like the one showed in picture 4. And single main switch to control all the lines is prohibited. The quantity of the sub-switch depends on the quantity of the branches and the load capacity.
- ◆ Make sure that all the branches are off before turn on the main switch.
- ◆ Turn on the branch switch step by step after turning on the main switch, and at the same time, make sure that the interval is more than 5 seconds between each two switches.
- ◆ Please never turn off the main switch when all the sub-switches are turned on, because in this case, the impact shock caused by over load and the leakage inductance from the transformer will lead to huge energy,thus low frequent , high frequent current and voltage surge will damage the driver, LED or other accessories.



Picture 4 Switch configuration (Switch on or off step by step)

Procedures of turning on the lamp:

- Step 1: Turn on S0->S1->S11->S12->S13->S1n, and until all the last stage switches are turned on;
Step 2: Turn on S2->S21->S22->S23->S2n, and until all the last stage switches are turned on;
Step n: Turn on Sn->Sn1->Sn2->Sn3->Snn, and until all the last stage switches are turned on.

Procedures of turning off the lamp:

- Step 1: Turn off S0->S1->S11->S12->S13->S1n, and until all the last stage switches are turned off;
Step 2: Turn off S2->S21->S22->S23->S2n, and until all the last stage switches are turned off;
Step n: Turn off Sn->Sn1->Sn2->Sn3->Snn, and until all the last stage switches are turned off.

Transport & Storage requirements

Our LED street light is packaged with hard paper carton box, and severe mechanical shock, exposure to rain, inversion, rolling and heavy load are all not prohibited. The LED street light should be stored in cool, dry and clean ambience and the temperature is -20℃ ~40℃

Precautions

Please read the manual carefully before using in case of accidents and damage.
The products don't need to repair in most of the cases, but if maintenance is a needed, please contact us.
Please check the product carefully before using it, and please contact us if there is anomalies.
There will be temperature rise during working, and this is a normal phenomenon.

Security Caution

The warranty does not cover the damage caused by the following reasons:
Input voltage of the LED street light is not the same in the product specifications.
No good ground while the LED street light is working.
External force or throw the lamp into the water or the fire.
Artificial or external irresistible factors (say earthquake,flood, fire,lightning)
Products that is repaired or try to repair by people that is not authorized by our company.

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