

LED type: Hanging 500

Surgical lighting

Warning: there are strict requirements in the installation and use of surgical lighting. Please read the product manual carefully and install, use and maintain it according to the requirements of the manual.

This product can not be used in the presence of flammable anesthetic gases

Embedded M12 diameter full thread bolts and fixed plate notes:

The ceiling must be larger than 800NM. Four M12 × 20cm bolts must be embedded in the reinforced concrete ceiling to expose 9cm of the ceiling so that hangers or plates can be installed, ensure shadowless lamp can withstand torque after suspension.

The Factor of safety of the suspension system is ≥ 9 (four M12 bolts fasten the product, the load of the single bolt is more than 200kg, the bearing capacity of the four bolts is 800kg, and the weight of the product is $\leq 81\text{kg}$)

Please read the instruction carefully before using this product. The production unit shall be responsible for the safety, reliability and performance of the equipment under the following conditions:

Installation, maintenance are approved by the factory personnel;

The equipment is used in accordance with the requirements of the operation manual under the prescribed conditions;

All accessories must be purchased from the company, otherwise caused by surface burst lamp, lamp beads or electrical system burned out, shadowless lamp can not be used normally, the company will not be responsible for.

(note) the safety and cost of the ceiling installation works shall be borne by the hospital or the building construction unit.

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Overview

1. The surgical lighting consists of a base, a cross arm, a balancer and a lamp body.
2. The lamp holder is composed of a base and a big protective cover, the lamp holder is composed of several groups of high-brightness LED lamp beads, the lamp holder and the elbow form the entire lamp body, the lamp body is fixed on the hanging system of the balancer, and the positioning is stable, can Do vertical or rotary movement, can meet the requirements of different heights and angles in surgery.
3. Product Structure Diagram:



Performance parameters

Scope of application

It is suitable for lighting of inspection department.

Performance parameters

Details	
Models	00
Illumination (LX)	30000-160000
Lamp bulb quantity	48
Bulb type	LED
Bulb life (hours)	>50000
Color temp (K)	3700-5000
Color temperature (Ra)	85-98
Lightbeam depth	50-180cm/20-71in
Diameter of spot	16-28CM/6.3-11 in
Light adjust range	1%-100%
Consumed power	80
Temp rise (docter head)	<1°C
Input power	AC100-240V 50/60HZ
Best install height	2.7-3.1m

Equipment and installation

The manufacturer sends engineers to install it. The damage caused by self-installation shall be borne by the customer.

1. The installation process should be well connected to the electrical circuit (power line AC220V) and tighten the fasteners of the connecting parts (important) ;
2. During the installation, the level of the shadowless lamp base must be calibrated strictly with a level meter (very important) .
3. Before the installation of the shadowless lamp, the customer should provide a 250V/10A switch/circuit breaker to complete the line insulation protection (important) .
4. The upper cross arm is provided with a small lamp head, and the lower cross arm is provided with a large lamp head.
5. Shadowless lamp balancer in factory inspection has been strictly adjusted, new products in the installation, do not need to adjust. After installation, if there is imbalance, please follow the instructions of the imbalance treatment method.
6. Tools for installation: Impact Hammer, ø16 impact drill, level, hammer, socket wrench (#19 open or #19 spanner) , Hex Wrench, Phillips head screwdriver.
7. Installation:

The first step is to install the hanger (flange plate) , the large plate is connected to the roof upward, and the small plate is connected to the shadowless lamp base downward;

①The ideal installation height of this product is 2.8 meters (that is, the distance from the shadowless lamp base to the ground) . As this product is a suspended load-bearing equipment, so the load-bearing roof and hanger load-bearing requirements.

- ② When hanger ≥ 1.5 m, extra diagonal support is required to ensure the stability of the hanger.
- ③ When the roof is made of concrete, a hanger is selected and fixed with not less than six expansion bolts (M12x100) .
- ④ When the roof is a floor structure, B hanger is used to penetrate the floor with core bolts. The upper part of the floor is fastened with steel plates and the lower part of the floor is fixed with 2 expansion bolts.
- ⑤ When the installation position has the structure beam, chooses the C hanger, each side uses not less than 3 expansion bolts to fix.

AHanger	BHanger	CHanger
		

Second, install the base (including cross arm)

- ① Connect the base to the hanger flange using 4 M12X100 bolts (with 14 M12 nuts) and adjust the nuts to level the base.

Step 3, install the balancer

- ① Plug in the terminal, the same color wire connected. And insert the tube wall.
- ② Butt-joint the two ends of the pipe wall, aiming at the bolt hole, respectively, 4(3 stainless steel cross-countersunk head bolts M5X6 and 1 M8X16 hexagon bolts) bolt fastening.

Step 4, install the lamp body (including lamp cap and elbow arm)

- ① Plug in the terminal, the same color wire connected. And insert the tube wall.
- ② Butt-end tube wall, align the bolt hole, the 3 stainless steel cross-countersunk head bolts M5X6 fastening.

Step 5, install the handle

The handle is aligned with the center base of the lamp head and twisted in

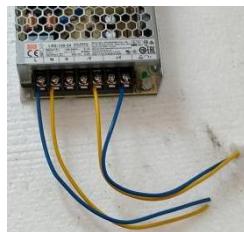
Step 6, adjust the balance of surgical lights

After installation, turn the rotating part of the shadowless lamp, such as the arm around the center of rotation tight or loose, adjust the arm brake screw (see figure below)



Step 7

- ① Fix the power supply on the base, align the remaining screw holes, and fasten with bolts
- ② Plug in terminal, Terminal Connect + v,-v and keep the same color.
- ③ The remaining L terminal (firewire) and N terminal (zero wire) on the power supply are connected to 220V AC.



Step 8, install the base shield

Put the large shield on the base of the shadowless lamp, and then use the shield bottom support, and respectively fasten with bolts.

Instructions for use

After the installation of surgical lighting, it should be electrified for acceptance.

1. Range of motion of surgical lights

Action items	Diameter of lamp cap(mm)
	500
Range of motion	
The cross arm rotates around the fixed seat	360°
The balancer rotates about the cross arm	340°
The balancer moves up and down	45°
The elbow on the lamp head turns around the balancer	340°
The elbow under the lamp cap turns around the elbow on the lamp cap	260°
The lamp body rotates around the bend pipe under the lamp cap	260°

2. Focus

The focusing knob of the surgical lamp is used for focusing. The diameter of the spot can be adjusted by rotating the focusing knob.

Daily Maintenance, trouble shooting

1. Regular maintenance

If you find any problem, please solve it in time according to the product specification. If you can not rule it out, please contact us.

Project	Frequency
Check the state of the fasteners of the connecting parts of the operation lighting	Every two months
Check the operation lighting circuit contact is good	Every two months
Check the flexibility of the moving parts of the surgical lighting	Every two months

2. Clean and disinfect

The surgical lamp surface must be cleaned and disinfected with a neutral household detergent and antistatic agent, not a phenolic or iodide or glutaraldehyde based disinfectant.

2.1 use soft cloth or sponge, wet cloth, do not use hard brush, wire brush, and do not use decontamination powder, paint, banana water, acid on any surface.

2.2 Medical gauze is often used to remove dust from the glass surface of the front hood in order to increase the illumination.

Note:

- 1) when cleaning and disinfecting the surgical lamp, the power must be cut off first and the liquid should be prevented from permeating into the lamp
- 2) do not use the brush, the steel wire ball and so on abrasion material and the alcohol, 84 disinfectant and so on similar products to clean the transparent plate.
- 3) users should strictly follow the above instructions.

The contents of the warnings and tips

1. Do not scratch or tap on the glass of the lamp;
2. Users are advised to be aware of the risk of overheating of the surgical site if the temperature of the two lamps shining on the same surgical area sometimes exceeds the standard requirement.
3. The surgical lamp is a hanging device. Always check the fastener for looseness to prevent falling accidents.
4. Don't put extra load on the surgical lights to avoid a fall.
5. The switching power supply of the surgical lighting must be used in the dry environment, otherwise it will cause the switching power supply to burn out and the surgical lighting can not work normally.
6. When cleaning and disinfecting surgical lighting, you must first cut off the power and prevent liquids from seeping into the lamp.
7. Do not use a brush, steel ball and other abrasive materials and alcohol, 84 disinfectant, such as similar products cleaning transparent glass.
8. Please use surgical lighting strictly under the following conditions:
Ambient temperature: 5-40 ° C;
relative humidity: ≤80% ;

atmospheric pressure: 860 hpa-1060 hpa

Power: AC220 v ± 22 v, 50 Hz ± 1 Hz.

If the work conditions do not meet the requirements of the components caused by damage or safety accidents by the user is responsible.

9. In order to ensure the normal use of surgical lighting, non-professional personnel are prohibited to dismantle or replace the LED lights, not open the lamp shell.

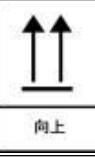
10. The front cover glass surface is often cleaned with medical gauze to improve the illumination. When the face cover glass needs to be cleaned, the power should be turned off and the face cover glass should be cleaned when the temperature drops to room temperature, otherwise, the glass may burst.

11. It is strictly forbidden to suspend any articles other than this equipment.

12. When a single lamp to reach the brightness of surgical lighting, should try to avoid the overlap of the two lamp!

13. Due to product upgrade, the control panel button may be inconsistent with this specification, in actual use, to the actual control panel button shall prevail.

Sample drawings of label and package identification

Symbols	Meaning	Meaning	Meaning
	Alternating current		Protective grounding
	Watch out for the heat	 易碎物品	Fragile objects
 禁用手钩	Disable Hand Hooks	 向上	up
 怕雨	Afraid of rain	 堆码层数极限 3	Stack layer limit

Storage and transport conditions

1. Ambient Temperature: -40-55 ° C
2. Relative Humidity: no more than 80%

3. Atmospheric pressure: 500-1060 hpa

And no corrosive gas and well-ventilated indoor.

Surgical lighting is fragile, sensitive to sharp or hard objects scratched or damaged products, in the course of transport, please use the original packaging, and by experienced transport agent transport.

Production date, safe use period

Production date: see nameplate

Safe Use Life: This product use life of ten years (from the date of production)

Packing list

Models LED type: Hanging 500

Serial number	Name	Quantity
1	The Great Shield	1
2	Protective cover undercarriage	1
3	Switching power supply	1
4	Rotary arm fixing seat	1
5	Balance Arm	1
6	500 lamp holder	1
7	Hexagonal spanner	1
8	Sterilize the handle	2
9	Fixing bolts for installation	1
11	Instruction manual	1

Unpack and check

1. Special nail opener must be used to open the box to prevent damage to surgical lighting;
2. After unpacking, take out the packing box, according to the name, specification, model and quantity of the items listed on the packing list, check whether the missing packing, wrong packing, damage, and timely contact the company found problems. Note: When the

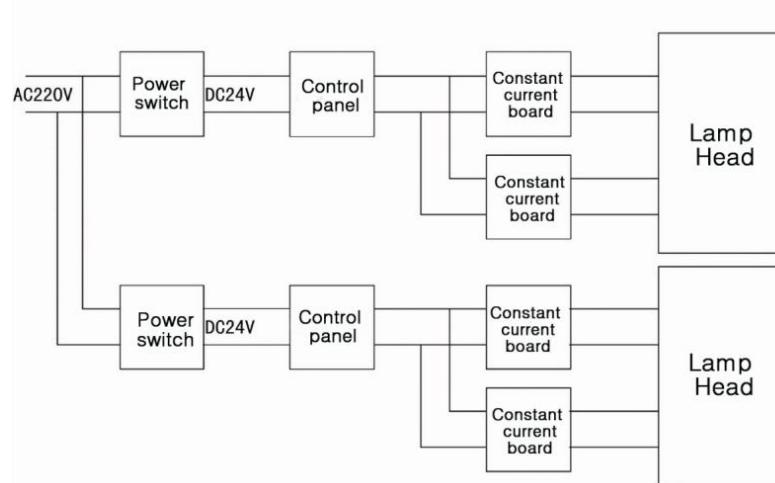
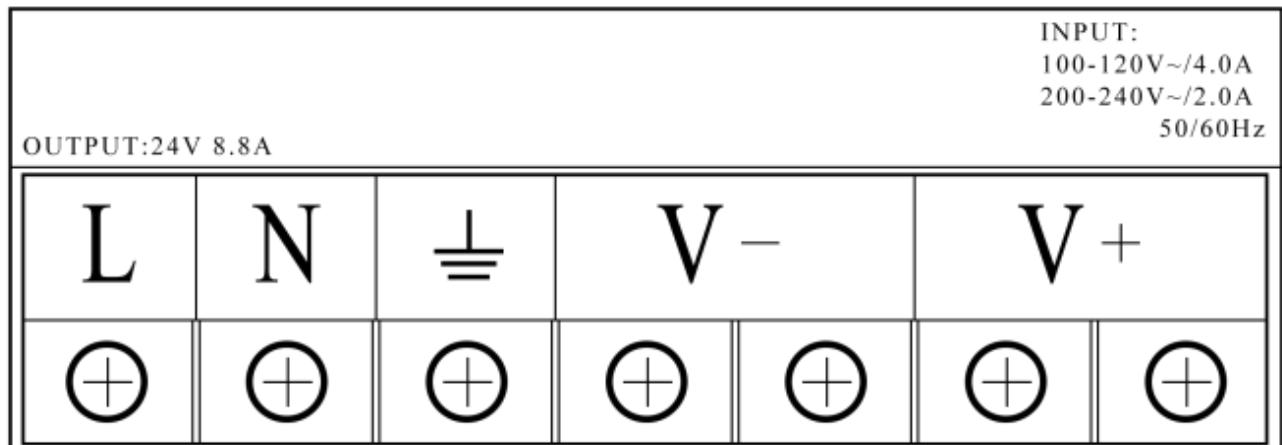
lamp cap is taken out, it is strictly forbidden to lower the front mask to avoid crushing and breaking the mask.

Circuit diagram

1. Switch power supply connection

Switch the power supply parts of the wire connection according to the requirements of the diagram to connect.

Warning: the power cord must be connected as shown.



Explanation:

When the equipment is installed, it must be connected with the protective ground on the fixed base