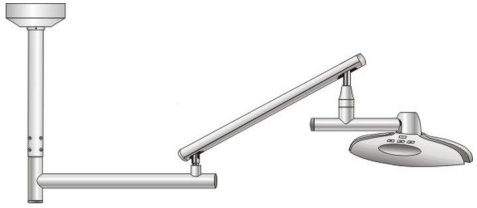
XV Configuration list

NO.	Name	Specification	Quantity	Remark
1	Lamp head	LED-90W	1	
2	Lamp arm	—	1	
3	Central column	φ45*820mm	1	
4	Ceiling plate	Φ198*10mm	1	
5	Decorative cover	φ255*190mm	1	
6	Tool	4# Hexagon socket wrench	1	
		2.5# Hexagon socket wrench	1	
7	Expansion screw	M12*120mm	4	
8	User manual	A5	1	
9	Certificate	—	1	
Notice: Please check according to the configuration list within 3 days after receiving.				

2025-11-25 version 2

Operation Light

USER MANUAL



Content

I Brief introduction.....1

II Performance summary.....1

III Main technical parameters.....1

IV Security tips and symbol instructions.....2

V Working environment.....3

VI Product interface.....3

VII Usage.....3

VIII Attentions.....7

IX Problem solution.....8

X Bulb replacement.....8

XI After-sales service and warranty.....8

XII Transportation and storage condition.....9

XIII Electrical schematic diagram and component list.....9

XIV Warranty card and maintenance card.....13

XV Configuration list.....14

XIV Warranty card and maintenance card

Warranty card

Company name：			
Address		Phone No.	
Product name		Model	
Serial Number		Manufacture date	
Sale date			
Fault description:			
Remark: The warranty of our products is 18 months since release date.Please keep the certificate and instruction properly, and send it back with the product when repairing.			

(Please truthfully fill in this form, cut it according to the dotted line and send it back to our company, thank you for your cooperation)

Maintenance card

Company name：			
Address		Phone No.	
Product name		Model	
Serial Number		Manufacture date	
Sale date			
Fault description:			
Note: if you use this card beyond warranty period, you can enjoy 30% discount repair service			

44	LED bulb	F3.0 Green Bi-Color	LED1	1	
45	Bridge Rectifier	KBP307	BR1	1	
46	Half-Bridge	MBR10200 TO-220F	D4	1	
47	Diode	1N4007 DO-41	D1	1	
48	Power Transistor	RS8N65F TO-220F	Q1	1	
49	Common Mode Choke	16*9*6 Green ring，Wire diameter 0.5，L?18mH	LF1	1	

Any product is subject to update or improvement, and the circuit or component model specifications of this product are subject to change without notice.

I Brief introduction

The operation lamp adopts brand LED bulbs as the light source, reflecting and concentrating light, and the brightness is adjustable in four levels. The lamp head rotates freely and provides multi-angle illumination. Ceiling-mounted installation doesn't take up much space.

This product is composed of lamp head, spring arm, central column, ceiling bracket and switching power supply.

The diameter of the lamp head of this product is 360mm, which is larger than the ordinary examination lamp head but smaller than the lamp panel of the shadowless lamp. Make up for small light spot, low illuminance and short lighting depth of the examination lamp. It is suitable for lighting in oral implants, medical aesthetics, pet medical care, teaching and various outpatient departments, etc.

II Performance summary

1.The product adopts a low-voltage output and cold lighting design and uses wide-voltage power supply system. Low-pressure energy-saving, stable performance, safe and reliable, and extremely long service life.
2.The lamp head and lamp arm of this product can rotate freely, providing multi-angle illumination. It is easy to install and operate.
3.The design and production of this product fully implement GB9706.1-2020 "Medical Electrical Apparatus - Part 1: Safety - General Requirements", which is guaranteed in safety.

III Main technical parameters

1.Rated voltage: AC100-240V, 50Hz/60Hz
2.Input power: ≤30VA
3.Product Specification: LED-90W
4.Product color temperature: 4800±300K
5.Lamp head diameter: 360mm
6.Working distance: 700mm

IV Security tips and symbol instructions

1.When the operation lamp is in use, to avoid the risks of fire, electric shock or personal injury, basic safety precautions should always be followed.
2.Please read the instructions carefully and follow the instructions.
3.The AC power supply for the operation lamp should be equipped with a switch and supplied through a leakage protection device.
4.The installation and commissioning of operation lamp must be carried out by professionals.
5.Before cleaning the operation lamp, turn off power and unplug, do not use liquid or spray cleaner.
6.Do not use the operation lamp near water.
7.When changing the bulb, you must first turn off the power switch and unplug the power cord. The old bulbs that have been replaced should be put in the waste bin and not discarded randomly.
8.Maintenance of the operation lamp must be operated by professional personnel. It is recommended that the operator wear an electrostatic ring to work.
9.The brightness of the operation lamp is very high. Caution should be exercised when using it for eye illumination. Do not observe with your eyes from the front when in use to avoid eye damage!
10.Illustration of symbols:


Attention ! Check the attached file.


Protect the earth.


Switch


Brightness decrease


Brightness increase

27	SMD IC	AZ431/UTC43 1 0.5% SOT-23	IC3	1	
28	SMD IC	CR6855 SOT23-6	IC1	1	
29	Varistor	10D471K	MOV1	1	
30	Electrolytic Capacitor	68uF 400V 16*25	E1	1	
31	Electrolytic Capacitor	470uF 50V 10*20 LOWESR	E3，E4	2	
32	Electrolytic Capacitor	22uF 50V 5*11	E2	1	
33	Variable Resistor	50K（503）	VR	1	
34	Jumper	0.6 Jumper Wire	L1	1	
35	X2 Capacitor	0.22uF 275V X2 P=15	CX1	1	
36	Y1 Capacitor	222M 400V Y1 P=10	CY1	1	
37	Fuse	4A 250V 3*10	F1	1	
38	Mylar Capacitor	2J472J P=4.5	C1	1	
39	Ceramic Disc Capacitor	330p 1KV P=4.5	C5	1	
40	Terminal Block	2P P=5.0	CON1 CON2	2	
41	Thermistor	5D-9 P=10	RT1	1	
42	Optocoupler	EL817C DIP4	IC2	1	
43	Transformer	ER2828 5+5 立式	T1	1	

7	Chip Resistor	1K 5% 0805	R21	1	
8	Chip Resistor	2.7K 5% 0805	R19	1	
9	Chip Resistor	47R 5% 0805	R11	1	
10	Chip Resistor	0R 0805	J1	1	
11	Chip Resistor	470R 5% 0805	R13	1	
12	Chip Resistor	4.7K 5% 0805	R17 R20	2	
13	Chip Resistor	10R 5% 0805	R10	1	
14	Chip Resistor	4.3K 1% 0805	R24	1	
15	Chip Resistor	200K 5% 1206	R4 R5	2	
17	Chip Resistor	10K 1% 0805	R12 R23	2	
18	Chip Resistor	39K 1% 0805	R22	1	
19	Chip Capacitor	470P 25V 0805 X7R	C3	1	
20	Chip Capacitor	47P 1KV 1206 X5R	C2	1	
21	Chip Capacitor	103 1KV 1206 X6R	C9	1	
22	Chip Capacitor	102 50V 0805 X7R	C4	1	
23	Chip Capacitor	104 50V 0805 X7R	C6 C7	2	
24	Chip Diode	1N4148 SOD-123	D2	1	
25	Chip Diode	FR107 SOD-123	D3	1	
26	Chip Diode	3.9V SOD-323 Negative Terminal Towards Boad Edge	R25	1	

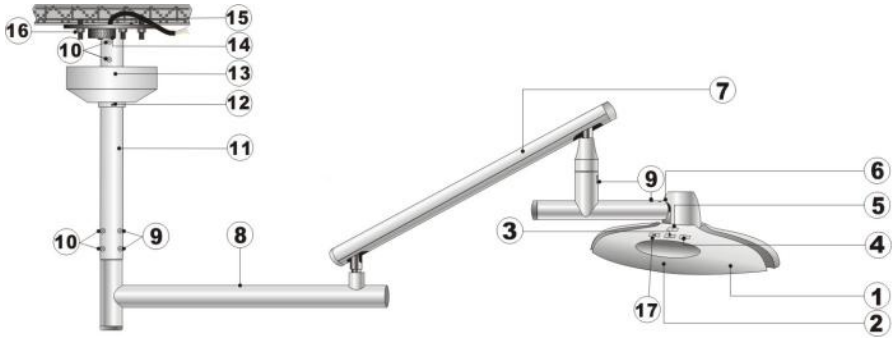
V Working environment

Environment temperature: -5℃ ~40℃

Relative humidity: 35%~75%

Atmospheric pressure:700hPa～1060hPa

VI Product interface （Picture 1）



①Lamp head ②Handle ③Switch ④Brightness increase
⑤Brightness gear display ⑥rotating shaft ⑦Spring arm
⑧Horizontal arm ⑨Damping adjustment screw ⑩Fixing screw
⑪Central column ⑫decorative cover screw ⑬Decorative cover
⑭Switching power supply ⑮Ceiling plate ⑯Expansion screw
⑰Brightness decrease

Picture 1

VII Usage

1.Check before use

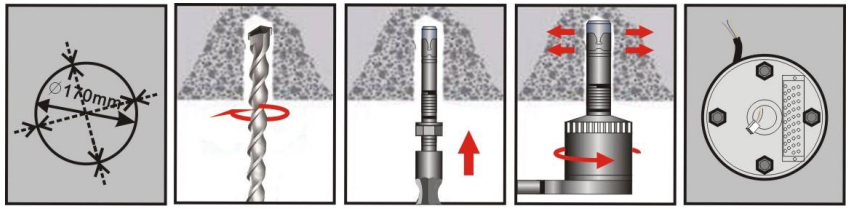
1)Unpack and check whether the product is damaged or missing parts

2)According to the Configuration List, check whether the product model, name, quantity and accessories are consistent with the Configuration List. If any problem is found, please contact manufacturer in time.

3)Read the instructions carefully and follow the installation steps.

2.Product installation

1)Marking and drilling: According to the dimensions in Picture 2-1, mark at appropriate positions on the roof. [Note: The marking position should be at least 1600mm away from the surrounding walls as much as possible to ensure that the operation lamp can be rotated to any position.] Drill four embedded screw holes with a depth of 110mm each at the marked positions using a φ16mm drill bit, as shown in Picture 2-2. After removing the debris, insert the M12*120mm expansion screw ⑯ and strike it with a hammer until it is fully inserted into the embedded hole, as shown in Picture 2-3. And ensure that the end face of the expansion pipe is at the same horizontal level as the wall surface. Select an appropriate wrench to tighten the nut to ensure safety and accuracy, as shown in Picture 2-4.



Picture 2

2)Ceiling plate installation: Remove the nuts and washers from the expansion screws, align the 4 φ13 holes of the ceiling plate⑮ with the 4 expansion screws⑯, install it on the roof, then tighten the nuts and expose the AC line outside the ceiling plate, as shown in Picture 2-5.
3)Central column installation: First, remove the two M6 screws on the connector between the ceiling plate and the middle column. Then, insert the decorative cover⑬ into the upper end of the central column⑪ and pass the wire through the central column, as shown in Picture 3-1. Then connect the central column⑪ to the ceiling plate⑮, install two M6 screws and tighten them, as shown in Picture 3-2.

◆If the marks on the product such as model, serial number, date of manufacture has been altered, deleted, moved, or unidentifiable, will not provide free warranty service.
◆Failure caused by human factors such as falling, squeezing, soaking and damp is not covered by the warranty
◆The production date is shown on label, service life is 5 years, we provide lifetime maintenance.

XII Transportation and storage condition

Environment temperature: -40℃～55℃
Relative humidity: 30%~80%
Atmospheric pressure: 500hpa~1060hpa

XIII Electrical schematic diagram and component list



No.	Material name	Material specification	Material number	Quantity	Remark
1	PCB	GF-048 V1.1 t=1.6 FR4 2014/11/28			
2	Chip Resistor	0.51R 1% 1210	RS1 RS2	2	
3	Chip Resistor	100R 5% 1206	R15 R16	2	
4	Chip Resistor	47R 5% 1206	R8.R9	2	
5	Chip Resistor	4.7K 5% 1206	R18	1	
6	Chip Resistor	750K 5% 1206	R1 R2 R6 R7	4	

IX Failure judgment and eliminate （This requires professional operation）

Phenomena	Reason	Solution
Turn on the switch, but the lamp doesn't work.	1.The network power switch is not on.	Turn on the network power switch to supply power to the lamp.
	2.Power supply line is Disconnected.	Switch to a live supply line.
	3.Switch③ is not turned on.	Press switch ③ to turn on the lamp.
	4.The plug-in connection was not done properly.	Check the plugins in Picture 4-1 and Picture 5-1.
	5.The power board is damaged.	Replace the power board with the same specification.
	6.System line failure.	Contact the service department of our company.

X Bulb replacement

The bulb of the operation lamp is LED light source, normal life is up to 10000 hours, no need to replace normally. In case of any failure, please inform the manufacturer in time for processing.

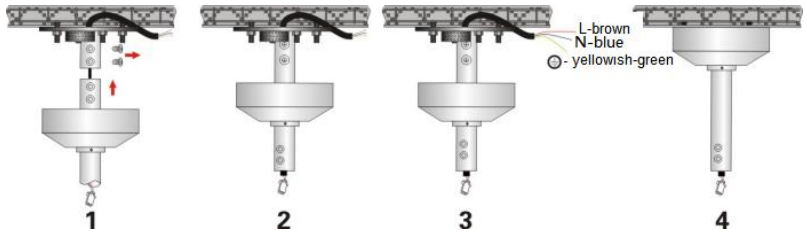
XI After-sales service

◆The product warranty period is 18 months

◆During warranty period, send or give us your warranty card and purchase invoices, we will provide free maintenance service when you have quality problems.

◆Light bulbs are consumable accessories.

◆If you modified the function by yourself and then it does not work , is not covered under warranty.



Picture 3

4)AC power connection: Before connecting the AC power supply, the user needs to confirm that the AC power supply is provided by installing a switch on the leakage protection device. Turn off the switch. Connect the brown wire, blue wire and yellowish-green wire to the L phase wire, N phase wire and ground wire respectively as shown in Picture 3-3, and wrap them firmly with insulating tape. Then push the decorative cover⑬ into place and tighten the decorative cover screws⑫, as shown in Picture 3-4.



Picture 4

5)Spring arm and horizontal arm installation: Remove the two M6 screws on the rotating shaft of the horizontal arm⑧, firmly connect the connection plug between the central column and the horizontal arm, then connect the horizontal arm⑧ to the central column⑪, install the two M6 screws and tighten them. See Picture 4-1、2.



Picture 5

6)Lamp head installation: Remove the fixing screws on the lamp head's rotating shaft, firmly connect the connection plugs of the lamp head and the spring arm ⑦, then connect the lamp head to the spring arm⑦, install the fixing screws and tighten them. See Picture 5-1 and 2. The installation is completed.

3.Usage

1)Turn on the power switch, touch the switch③ on the lamp head①, then the operation lamp will light up and start working.

2)The operation lamp has four levels of brightness adjustment. Press brightness increase④ to adjust the brightness from level 4 to level 1, and press brightness decrease⑰ to adjust the brightness from level 1 to level 4.

3)By holding handle②, you can adjust the height of the lamp head up and down. You can also rotate the lamp head left and right with the rotating shaft⑥ as the fulcrum. Additionally, you can use the connection between the lamp head and the lamp arm as the fulcrum to rotate the lamp head to change the lighting position and Angle.

4)By holding the handle②, you can use the middle column⑪ or the connection between the balance arm⑧ and the spring arm⑦ as the fulcrum to rotate the lamp arm to change the lighting Angle and position.

5)When the balance arm⑧ drifts due to being too loose or is difficult to rotate due to being too tight, you can use a 2.5mm Hexagon socket wrench to adjust the damping adjustment screw⑨ on the central column to make it neither too tight nor too loose, so that the horizontal arm can rotate easily without drifting.

6)When the lamp head cannot rotate due to being too tight or cannot be positioned due to too loose, you can use a 2.5mm Hexagon socket wrench to adjust the damping adjustment screw⑨ on the lamp head bracket to make it neither too tight nor too loose, so that the lamp head can rotate easily and be positioned properly.

7)When the work is done, press the lamp switch③ to turn off the lamp, then disconnect the AC power.

VIII Attentions

1.The surface of the operation lamp can be cleaned with a soft cloth or sponge. Do not use hard-bristled brushes, wire brushes, nor apply scouring powder, paint, banana water, acid, etc. to any surface.

2.When installing the operation lamp, please assemble and reinforce it in accordance with the technical requirements stated in the manual.

3.The surface of the operation lamp should be cleaned and disinfected after the operation. [Please unplug the AC power plug before cleaning and prevent liquid from seeping into the lamp.] The cleaning agent must be neutral household detergent and anti-static agent. Phenolic, iodide or pentanurone-based disinfectants must not be used.

4.The lens surface of the operation lamp should be frequently cleaned of dust with medical gauze or a soft brush to maintain the illuminance.

5.It is strictly prohibited to hang any items other than this equipment on the operation lamp body. Do not heavily pull or rotate the lamp head or lamp arm when in use.

6.Each month, use 75% alcohol cotton to remove dust on the surface of the operation lamp [Note: Please unplug the AC power plug before cleaning and prevent liquid from seeping into the lamp.].

7.Conduct a comprehensive inspection of nut, switch, brightness and noise of the operation lamp every quarter, timely repair and adjustment if any abnormality is found.

8.Bulbs are consumables and have a basic life span. The normal life of LED bulb is about 10000 hours. Pay attention to how long bulbs are used and prepare for them in advance.

9.Do not touch or press the lens of the light-emitting surface to prevent it from loosening or falling off due to pressing.

10.The service life of the operation lamp is five years. After the expiration, if it is scrapped, its metal, electronic components, plastic, glass and other materials should be uniformly and strictly treated in accordance with local environmental protection regulations to prevent their spread or reuse, minimizing the risk of environmental pollution.