CKC

Qdot 16 IP

⚠

Before carrying out any installation, maintenance, or cleaning of the lighting fixtures, please confirm that the power has been cut off! Before using this fixture, please read this manual. Our company reserves the right to change product design and specifications without prior notice.

CONTENTS

★ Statement ★

■ This manual contains important information on safe use and installation. Please read it carefully and follow the requirements for operation and installation. Please keep this manual properly;

■ The equipment has good performance and complete packaging when it leaves the factory. The operator should strictly follow the warning items and operating instructions stated in the manual. Any malfunction or damage caused by misuse or neglect of the manual is not within the scope of our company's responsibility and warranty;

■ The relevant information in this manual is for reference only. All lighting products are subject to the actual product. Any changes will not be notified separately, and our company reserves the right of final interpretation.

1. Security Warning Information

Attention !

Please read the safety requirements information in this section carefully before installing, powering on, operating, or repairing the lighting fixtures.

● This product is for professional use and is not suitable for other purposes;

● After receiving the lighting fixtures, please check if the packaging is complete and unpack to check if the equipment has been damaged due to transportation. If there is any damage caused by transportation, please do not use this lamp and contact local technicians or manufacturers as soon as possible;

● When transporting again, please use the original packaging materials;

● If there is obvious damage to the machine casing, it should be replaced in a timely manner;

● When hanging lamps, it is necessary to verify that the hanging equipment can withstand more than 6 times the weight of the lamp. After installation, it is necessary to verify that the lamp cover and installation buckle are secure and undamaged. At the same time, a safety rope should be used as an auxiliary safety for the lamp and fixed on the truss;

● The light source inside this luminaire should be replaced by the manufacturer, its service agent, or a similarly qualified person;

● If you have any other questions about how to safely operate the equipment, please contact our technical personnel or call our service hotline;

● This product has a protection level of IP65 and is suitable for indoor use.

● Lighting fixtures should be kept clean and avoid prolonged use in overheated or dusty environments to prevent contact with chemical liquids;

● When using the product, attention should be paid to avoiding serious or fatal injuries caused by fire, heat, electrical shock, and ultraviolet radiation. Before powering on or installing, read the instruction manual first. Follow the safety precautions for operation and pay attention to the warning signs on the instructions and equipment;

● Only professionals are allowed to install, operate, and maintain lighting fixtures, and strictly follow the procedures stated in the operating instructions.

● The eyes cannot directly look at the luminous object;

● Do not connect this device to any dimmer;

● If visible damage occurs to the protective casing, lens, and display screen on the lighting fixture, it is considered as damage to the point of loss;

● Please do not place any filters or other items at the light outlet, and do not replace non original parts;

● The minimum safe illumination distance of the lamp is 1m.

● Before installation, please confirm that the power supply voltage used matches the voltage indicated on the light fixture. Each lighting fixture should be properly grounded and electrically installed according to relevant standards;

● Please disconnect the power before repairing or cleaning the equipment;

● During the operation of the lighting fixtures, touching the wires is prohibited to prevent electric shock;

● If the external soft cable or wire of this lamp is damaged, the wire should be replaced by the manufacturer, its agent, or a similarly qualified person to avoid danger;

● Avoid flammable liquids, water, or metal conductors from entering the interior of the lamp to prevent electric shock or fire. If any foreign objects enter the lamp, immediately cut off the power supply;

● When multiple lamps are operated in series, the signal lines can be connected in multiple ways, but the power supply must be connected separately.

● The lighting fixtures work normally at -20 ℃ to 45 ℃ . When replacing any components or accessories in the equipment, ensure that the power is disconnected to prevent electric shock and injury;

● The maximum surface temperature of the lamp during operation can reach 78 ℃ , please do not touch it with bare hands.

● The lighting fixtures must be installed in a sufficiently ventilated area, at least 0.5m away from adjacent surfaces, to ensure that no ventilation holes are blocked;

● Do not install the lighting fixtures directly on flammable objects;

● The minimum distance between all outer surfaces of the lamp and combustible materials is 0.5m.

2. Product Introduction

2.1 Exterior dimensions of lighting fixtures

440 × 440 × 205 mm

440

440

327

205

153

79

200

126

95

76

Ø13

106

176
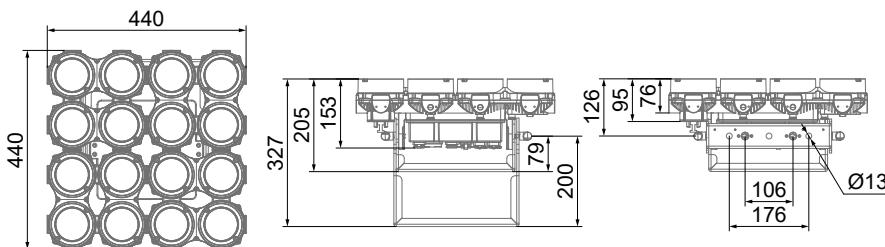
2.2 Packaging accessories

Name	QTY
Clamp	1 PCS
Power cord	1 PCS
Safety cable	1 PCS
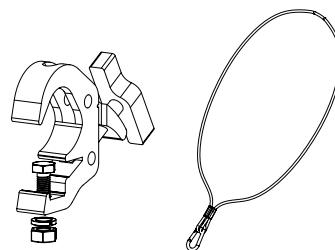
3. Main technical parameters of the equipment

Product execution standards：GB7000.1-2023,GB7000.217-2023，Q/YF-2017

● **Electrical parameter**

Rated input voltage：AC 100V-240V~ 50Hz/60Hz
Rated power of the entire fixture：366 W
Power factor：0.90F
Input Current：1.69A 220V

● **Source lifespan**

> 20000 hours

● **Optical system**

LED source：16 × 30W RGBW LED　　Output luminous flux：5727 Lm
Beam angel：55°　　　　　　　　　Field angel：83°

● **Control and programming**

Control channel：03/04/07/07+/06/08/08+/11/12/12+/48/64/72/128 CH
Protocol：DMX512, RDM, ArtNet/sACN
Data connect：3/5 pin signal in/out, RJ45 in/out

● **Illumination draw**

83°

	3	5	8
Lux	615	255	115
Distance(m)	5.31	8.85	14.16
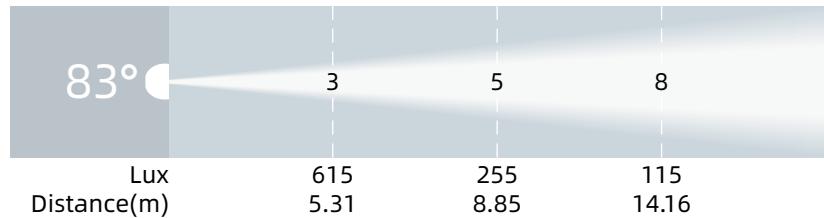
● **Other effect function**

Fast electronic strobe：1~25Hz　　　Dimmer curve：4 Kinds

● **Other features and functions**

Weight：14.5 KG

4. Packaging and transportation

4.1 Disassemble packaging

⚠ Notice：After receiving the fixture, please unpack and check for any damage caused by transportation. If there is any damage caused by transportation, please do not use this fixture and contact the local technical personnel or manufacturer as soon as possible.

4.2 Equipment packaging

1). Disconnect the power supply before packaging the lighting fixtures to allow them to cool completely;
2). Flight cases can only be stacked in two layers and are not allowed to be reversed.

5. Installation Requirements Explanation

5.1 Clamp install

Safety cable　　Clamp

The lighting fixtures can be installed on the stage or on any direction of the truss, and the clamp can be quickly and easily locked onto the truss.
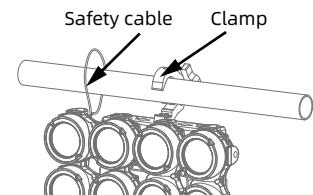
⚠ **Waining !**
The lighting fixture must be fixed with one clamp device, and an additional safety rope must be added to connect it to the safety hook. Be careful not to connect it to the handle.

Quick lock and clamp install

Install safety cablea

420
327
206

440

440

513
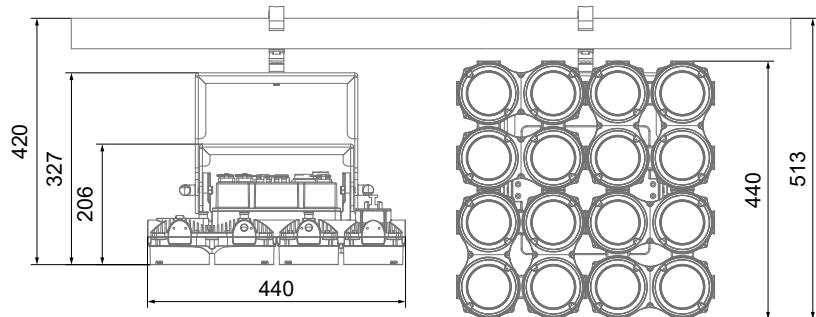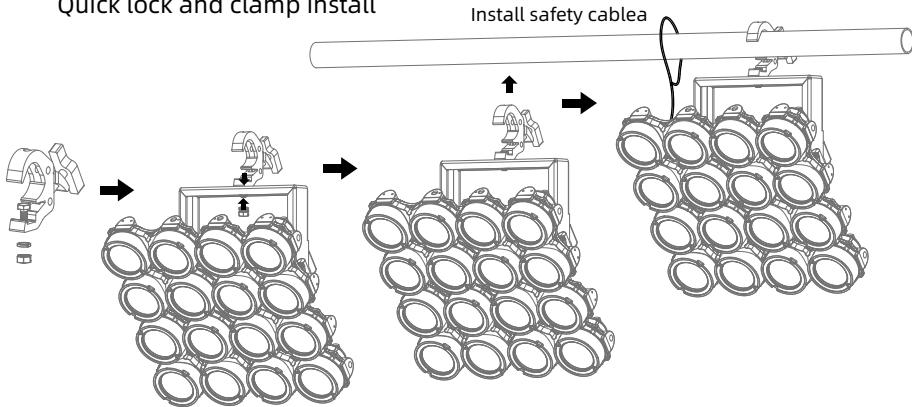
5.2 Equipment installation

1). Before installation, it is necessary to verify that the lamp hook and safety rope are not damaged, and that the installation object can withstand 6 times the total weight of the lamp and cable accessories;

2. Install the clamp on the handle, insert the clamp horizontally into the handle mounting hole, and tighten the screw (the shape of the light hook should be based on the actual product).

5.3、Hanging Installation Diagram
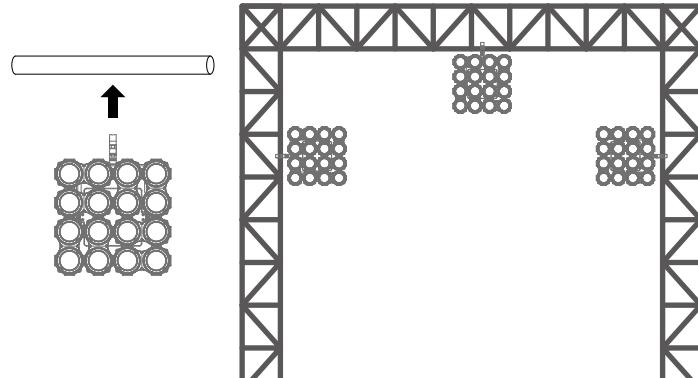
6. Power、Signal connect

6.1 Power and signal socket

1、USB
2、Breathable valve
3、Power input
4、Power output
5、DMX input
6、DMX output
7、NET input
8、NET output

1 2   3 4 5 6 7 8
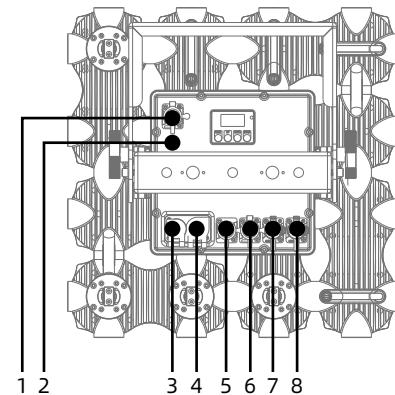
6.2 Power connect
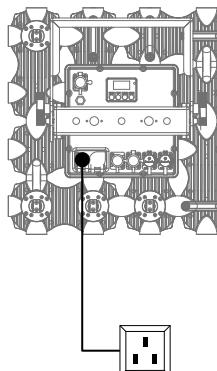
Connection method:

L(live wire) - brown wire

E(Ground wire) - yellow/green dual color line

N(Zero Line) - Blue Line

When connecting the power supply, please note that the voltage and frequency of the power supply must match the voltage and frequency marked on the light fixture. When multiple fixtures are used simultaneously, it is recommended to connect the power supply of each fixture separately, so that each fixture can be individually controlled for power on/off.

⚠️ **Attention:** When connecting the power supply, the ground wire (yellow/green dual color wire) must be safely grounded and comply with all relevant electrical installation standards.

Power In

This product uses Powercon In/Out to connect power cords. Due to power limitations, a 2 square meter power cord can carry up to 6 products at 220V and 2 product at 110V.

Waining !

- Do not connect too many fixtures or overload a single power cord;
- Do not use power cords with damaged insulation layers, and do not place power cords on other wires;
- When the fixture is not in use or cleaned, please unplug the power cord; Do not forcefully unplug or drag the power cord directly.

6.3 Signal connect

3-PIN XLR SOCKET	5-PIN XLR SOCKET	RJ-45 SOCKET

3-PIN XLR SOCKET
DMX OUT DMX IN
1:Ground
2: Signal (-)
3: Signal (+)

5-PIN XLR SOCKET
DMX OUT DMX IN
1:Ground
2: Signal (-)
3: Signal (+)
4: N.A.
5: N.A.

RJ-45 SOCKET
SOCKET PLUG
1:TD+ 5: N.A.
2: TD- 6: RX-
3: RX+ 7: N.A.
4: N.A. 8: N.A.
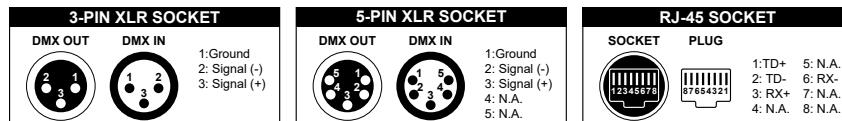
The lighting fixtures are equipped with standard DMX XLR and RJ-45 input and output sockets. Please use DMX512 shielded twisted pair signal cables or Category 5 or above network twisted pair cables for connection. The typical connection distance for DMX signal lines is 150 meters. When transmitting signals over long distances, a DMX512 signal amplifier must be added.

DMX IN DMX OUT   DMX IN DMX OUT   DMX IN DMX OUT

Controler
Terminal plug
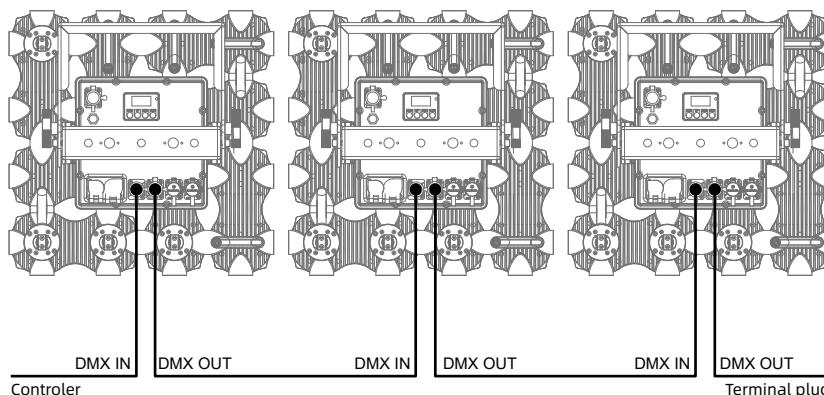
Connect a shielded twisted pair signal cable from the DMX output port of the controller to the DMX input port of the first device, and from the DMX output port of the first device to the DMX input port of the second device, and so on, until all the lamps are connected. Then install a terminal plug on the last 3 pin socket of each connected lamp output. (Weld a 4/1W, 120 Ω resistor between the 2 and 3 pins of a 3 or 5 core pin XLR plug).

3P
120Ω
2
1
3
PIN 2   PIN 3

5P
120Ω
3
2
4
1
5
PIN 2   PIN 3
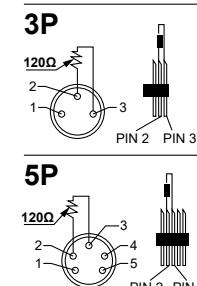
7. Control panel

7.1 Panel Introduction

● Adopting a LED display screen;

● Press the MODE key to view or modify the lighting function settings, and press the UP and DOWN keys to select the function menu;

● Press the ENTER key to confirm your selected function menu, which will take you to the corresponding sub menu in the menu. Each menu item represents a specific function of the lighting fixture (as shown in the table below);

MODE   UP   DOWN   ENTER
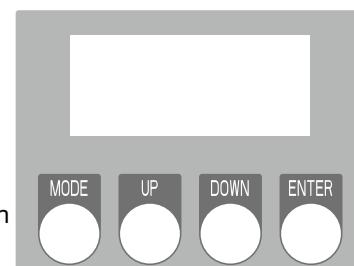
● Press the ENTER key to save your modifications or enter a submenu, and press the UP or DOWN key to modify values (increase or decrease values); Press the MODE key to return to the previous menu or exit.

● Press the MODE key to return to the previous menu or exit.

7.2、System menu

Note: The gray color block is the default setting value

Update Wait...			
Receive	ADDR:001 3CH RGB		
MENU Address	Address 001	001-510	
MENU UserMode	03/04/07/07+/06/08/08/11/12/12+/48/64/72/128		
MENU Function	Status	NO Dmx	Black/Hold
	LCD.Set	Display Key Lock Flash Invert	ON/OFF ON/OFF ON/OFF OFF/ON
	Temp. C/F		C F
	Dim Curve		Standard Stage TV Architec Theatre Stage2
	Disp.Set		ADDR Disp.CH Secondry
	Flip	Standard/Flip1/ Flip2/ Flip3/ Flip4	
	Macro	00-63	
	Gamma	1.0/2.0/2.2/2.4	
	Frequen	900,1000,1100,1200,1300,1400,1500, 2500,4000,5000,10k,15k,20k,25k	
	PROTOCOL	ArtNet/sACN	
	KlingNet	Enable/Disable	
	NET_SWIT	ON/OFF	
	FIX_ID	PassWord:000-255 (Password 050)	
	DFSE	ON/OFF	
	USB	ON/OFF	

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MENU Info	Time Info	Current (Hours) Total (Hours) Last (Hours) Clear ON/OFF (Password 050)
	TempInfo	LED Temp
	Err. Info	
	ModelInf	Qdot 16 IP
	Software	1U0V102 2U0V102 3U0V102
MENU Test	ManCtrl	Strobe 000-255 Dimmer 000-255 DimFine 000-255 DimMode 000-255 Red1 000-255 Green1 000-255 Blue1 000-255 Amber1 000-255 ......
	Calibrat	-Password 050- Red1,Green1,Blue1,White1......

8. DMX channel table:

CHANNEL														Value	Function
3	4	7	7+	6	8	8+	11	12	12+	48	64	72	128		
1	1	1	1	2	1	1	1	1	2					0-255	ALL Red: 0~100%
			2												ALL Red Fine: 0~100%
2	2	2	2	3	3	2	2	2	3					0-255	ALL Green: 0~100%
			4												ALL Green Fine: 0~100%
3	3	3	3	4	5	3	3	3	4					0-255	ALL Blue: 0~100%
			6												ALL Blue Fine: 0~100%
	4	4	4	5	7	4	4	4	5					0-255	ALL Amber: 0~100%
			8												ALL Amber Fine: 0~100%
							1	1	1	1				0-255	Red1: 0~100%
									2						Red1 Fine: 0~100%
							2	2	2	3				0-255	Green1 0~100%
									4						Green1 Fine: 0~100%
							3	3	3	5				0-255	Blue1 0~100%
									6						Blue1 Fine: 0~100%
							4	4	7					0-255	Amber1 0~100%
									8						Amber1 Fine: 0~100%
							4	5	5	9				0-255	Red2 0~100%
									10						Red2 Fine: 0~100%
							5	6	6	11				0-255	Green2 0~100%
									12						Green2 Fine: 0~100%
							6	7	7	13				0-255	Blue2 0~100%
									14						Blue2 Fine: 0~100%
							8	8	15					0-255	Amber2 0~100%
									16						Amber2 Fine: 0~100%
...															
							46	61	61	121				0-255	Red16 0~100%
									122						Red16 Fine: 0~100%
							47	62	62	123				0-255	Green16 0~100%
									124						Green16 Fine: 0~100%
							48	63	63	125				0-255	Blue16 0~100%
									126						Blue16 Fine: 0~100%
								64	64	127				0-255	Amber16 0~100%
									128						Amber16 Fine: 0~100%
					5	5	11			68				0-255	Macros 0~100%

			1		5	6	6	1			71		0-255	Strobe
	5	5	6		6	7	7	6			69		0-255	Dimmer Master Dim
	6	6			7		8	7			70		0-255	Dimmer Fine Master Dim
					8	9	8				65		0-255	Programs
					9	10	9				66		0-255	Programs Sp
					10	11	10				67		0-255	Programs Fade
	7	7			8	11	12	12			72		0-255	Dmx Mode

Dimmer mode table

	Dim Modes			Dim Modes
0-20	Standard		61-80	Architectural
21-40	Stage		81-100	Theatre
41-60	TV		101 - 255	Idle

Strobe function sheet

STROBE CHANNEL			
0-31	LED OFF	128-159	Pulse strobe speed slow to fast
32-63	LED ON	160-191	LED ON
64-95	Conventional Strobe Speed Slow to Fast	192-223	Random Strobe Speed Slow to Fast
96-127	LED ON	224-255	LED ON

STANDARD

1	2	3	4
8	7	6	5
9	10	11	12
16	15	14	13

FLIP 1

4	3	2	1
5	6	7	8
12	11	10	9
13	14	15	16

FLIP 2

16	15	14	13
9	10	11	12
8	7	6	5
1	2	3	4

FLIP 3

13	14	15	16
12	11	10	9
5	6	7	8
4	3	2	1

FLIP 4

1	2	3	4
8	7	6	5
9	10	11	12
16	15	14	13

High temperature warning

1	1	2	2
1	1	2	2
4	4	3	3
4	4	3	3
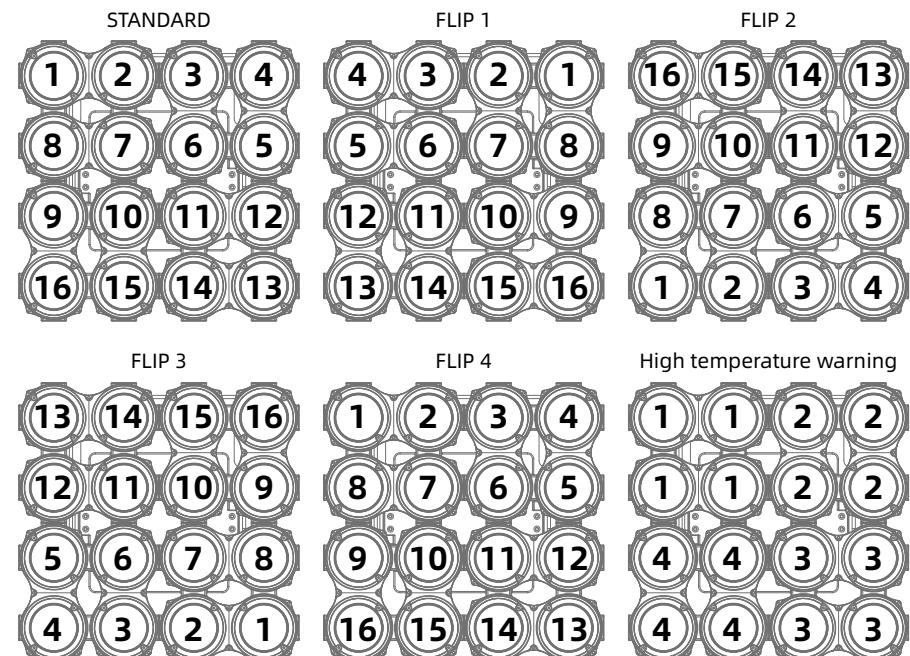
9. Control circuit diagram
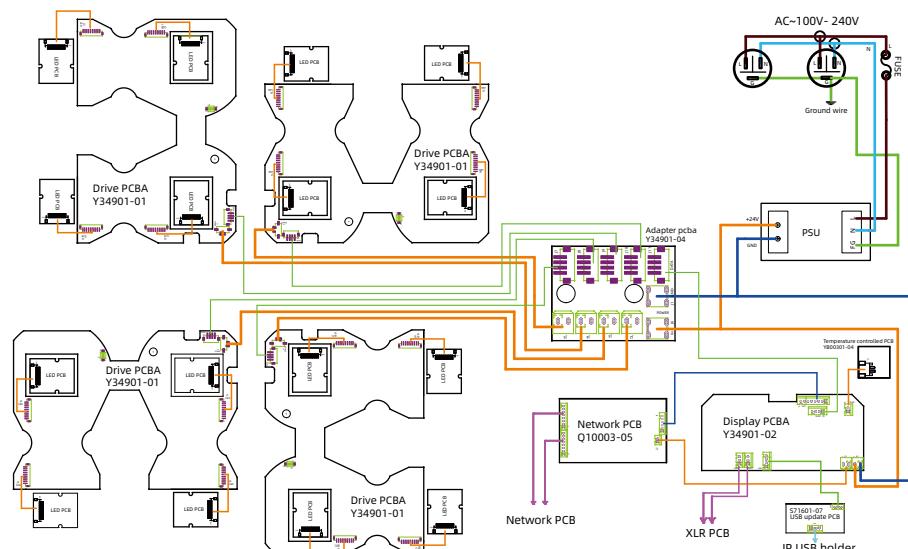
10. Regular maintenance

10.1 Cleaning and maintenance

Lighting fixtures require daily cleaning and maintenance, and their service life largely depends on the operating environment and standards. If you have any questions, please consult our technical engineers for advice. Maintenance and repair work not included in this book should be entrusted to our qualified technical engineers.

Attention! Damage caused by dust, e-liquid, or other reasons, as well as abnormal use, is not covered by the warranty.

Waining !

Before opening any lid, disconnect the power supply. Cleaning optical components requires gentle wiping as the coating surface is prone to scratching. Do not use damaging liquids or hard objects , as they may damage the plastic or coating surface.
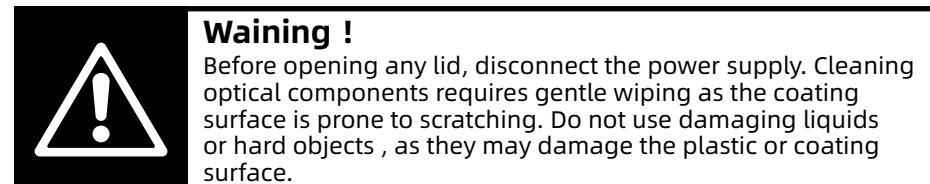
● When the lens is cracked or otherwise damaged, it should be replaced in a timely manner;

● When the brightness significantly decreases, the LED may have reached its expiration date and should be replaced in a timely manner;

● When the fixture cannot start, please check if the fixture power fuse is blown. If it is blown, a fuse of the same specification must be used for installation;

● The fixture is equipped with a temperature protection device. When the temperature is too high, the protection device will automatically reduce power.

● When this situation occurs, please check whether the fan is running normally, whether the fan and fan mesh are clogged with dust, identify the fault and repair it before starting the fixture. Please note that only qualified technicians are allowed to carry out maintenance work;

● To maintain smooth movement of the focusing lens, it is recommended to lubricate the guide rail of the focusing lens every three months. Excellent and high-temperature resistant lubricating grease should be used, and excessive grease should not be used as it can easily dirty adjacent components.

10.2 Fault analysis and handling

Fault description	Analysis	Processing method
No action after power on	Check if the power switch is turned on	Turn on
	Check if the fuse is blown	Replace
	Check if the output of PSU is normal	Detecting voltage
	Check if poor contact in the internal circuit	Reconnect
Uncontrolled lighting fixtures	Check if the DMX signal cable is connected correctly (If there is no signal, the display screen will flash)	Reconnect or replace
	Check if the address code is correct and if the DMX mode of the lighting fixture matches the settings	Reconfirm
	The main control PCB is damaged	Replace
Not bright	LED aging or damage	Replace
	Power PCB malfunction	Check/ Replace
	Loose or poor contact of the circuit	Reconnect
	PSU malfunction	Replace

Automatically turn off or dim the lights	LED aging	Replace
	Damaged cooling fan or abnormal wind speed	Replace
	Check the power output of the fan	Check/ Replace
	The temperature control switch is damaged	Replace
Weak light efficiency and uneven light spot	LED aging	Replace
	The optical mirror has accumulated dust or stains	Clean
	The optical mirror is damaged	Replace
Impure color	Weakening of light efficiency	Replace led PCB
	The color filter has accumulated dust or stains	Clean
	The color filter has been demolded or damaged	Replace

⚠️ **Attention!** The above analysis is for abnormal reference only. Non professionals are not allowed to disassemble and repair the machine