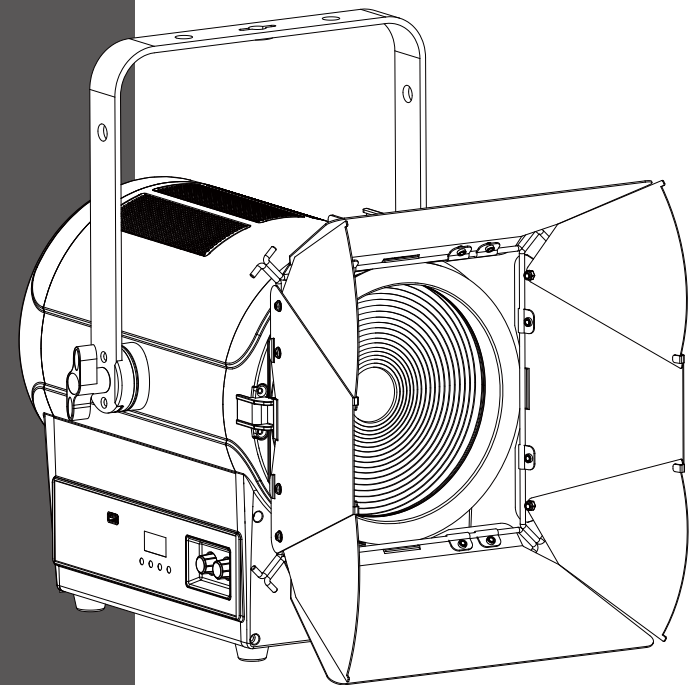




Fresnel

350 TW



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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.

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★ 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 IP30 and can be used both indoors and outdoors;
- Avoid direct external strong light shining on the lens, which may cause the lens to focus and burn out internal components.



- 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 °C to 45 °C . 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 68 °C , please do not touch it with bare hands.

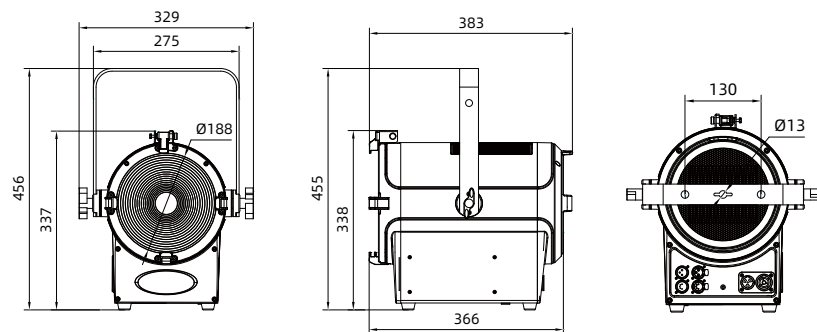


- The lighting fixtures must be installed in a sufficiently ventilated area, at least 0.5m away from adjacent surfaces, to ensure that no ventilation holes are blocked;
- Do not install the lighting fixtures directly on flammable objects;
- The minimum distance between all outer surfaces of the lamp and combustible materials is 0.5m.

2. Product Introduction

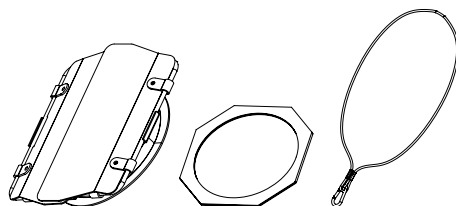
2.1 Exterior dimensions of lighting fixtures

329 x 383 x 456 mm



2.2 Packaging accessories

Name	QTY	
Barndoor	1	PCS
Gel frame	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, CE

● Electrical parameter

Rated input voltage: AC 100V-240V~ 50Hz/60Hz

Rated power of the entire fixture: 523W

Power factor: 0.99F

Input Current: 1.085A 220V

● LED lifespan

> 20000 hours

● Optical system

Source: 500W RGBLA LED

CCT: 2400 ~ 8000K

Output luminous flux: 19000 Lm

beam angle: 12° ~ 45°

spot angle: 24° ~ 66°

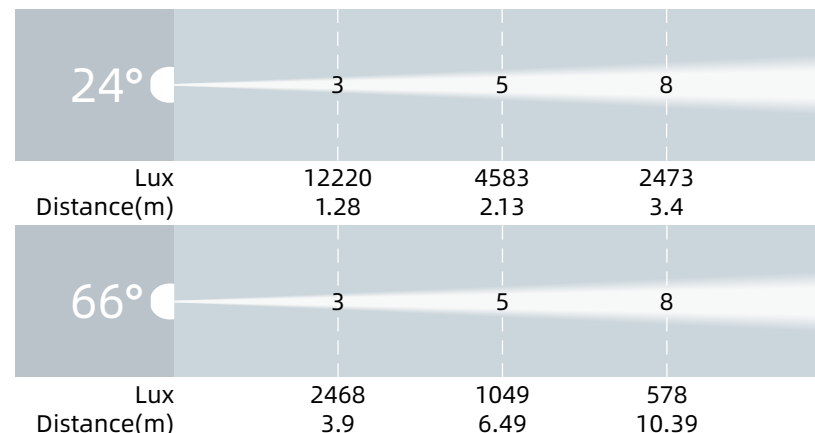
● Control and programming

Control channel: 1CH/7CH/10CH/12CH/15CH/19CH

Protocol: DMX512, RDM

Data connect: 3 or 5 pin signal in/out

● Illumination draw



● Other effect function

Fast electronic strobe: 1~25Hz

● Other features and functions

Weight: 12.2 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

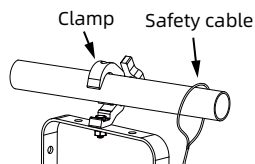
5.1 Clamp install

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.

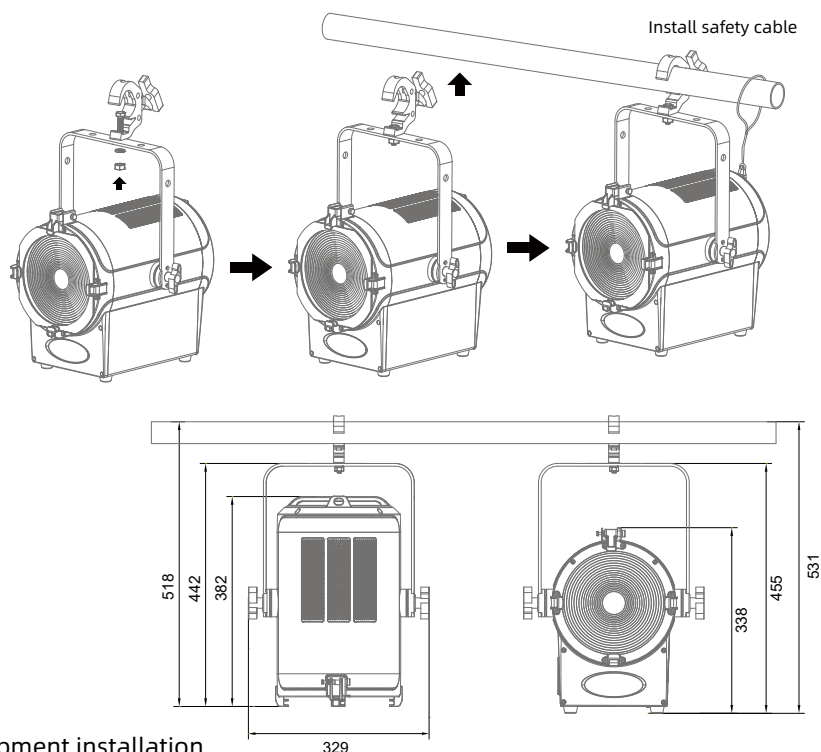


Warning !

Fixture can be used to fix the equipment, and a safety rope must be connected to the safety hook. Note that it cannot be connected to the handle.



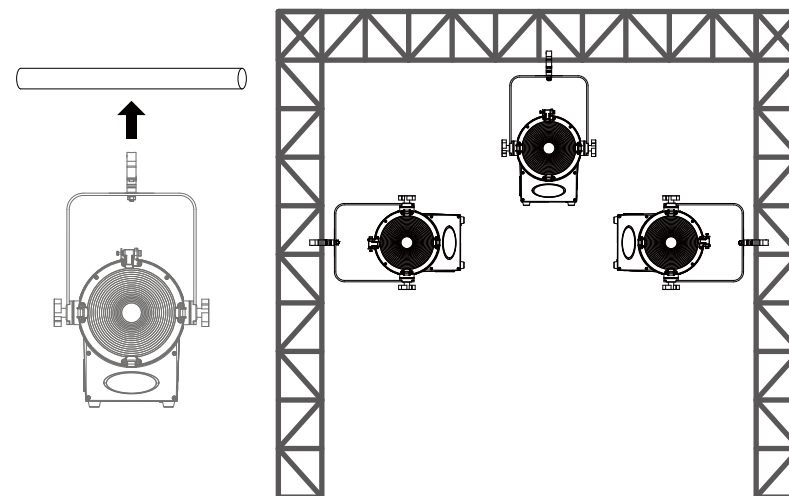
Installation of clamps and safety cable



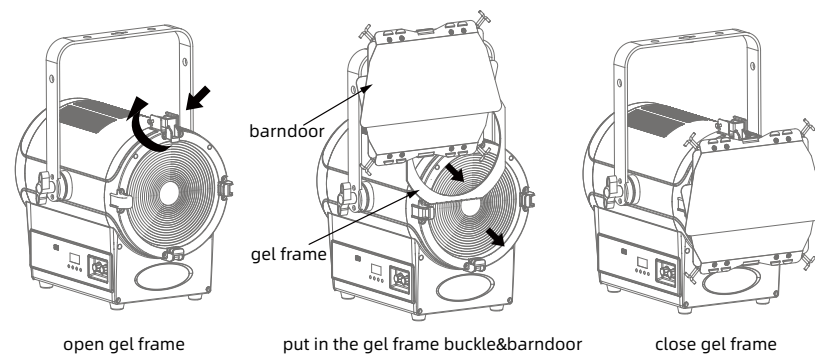
5.2 Equipment installation

- 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). The clamp is installed on the handle. Insert the clamp into the handle mounting hole horizontally and tighten it with bolts (the shape of clamp shall be subject to the actual object)..

5.3 Hanging Installation Diagram



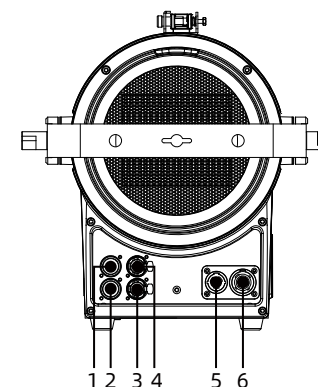
5.4, Barndoor and Gel frame installation



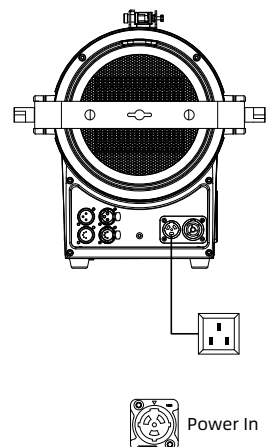
6. Power、Signal connect

6.1 Power and signal socket

- 1、3Pin XLR male
- 2、5Pin XLR male
- 3、5Pin XLR female
- 4、3Pin XLR female
- 5、Power input
- 6、Power output



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.



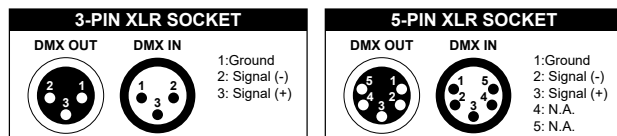
Attention: When connecting the power supply, the ground wire (yellow/green dual color wire) must be safely grounded and comply with all relevant electrical installation standards.

This product uses Powercon In/Out to connect power cable. Due to power limitations, a 2mm power cable can drive up to 4 fixtures at 220V and up to 1 fixture at 110V.

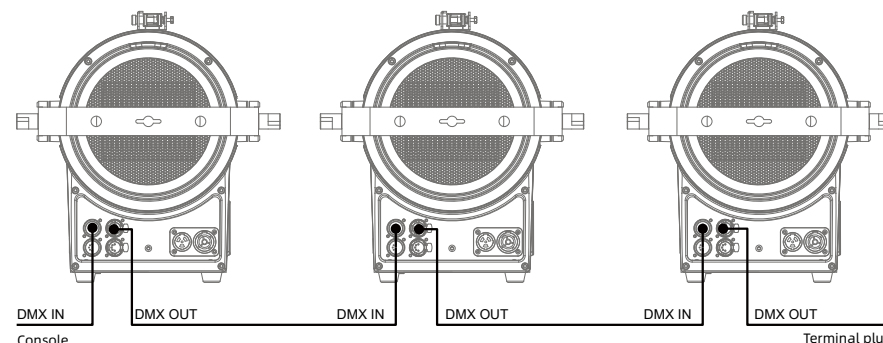
Warning !

- 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.

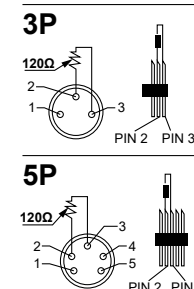
6.3 Signal connect



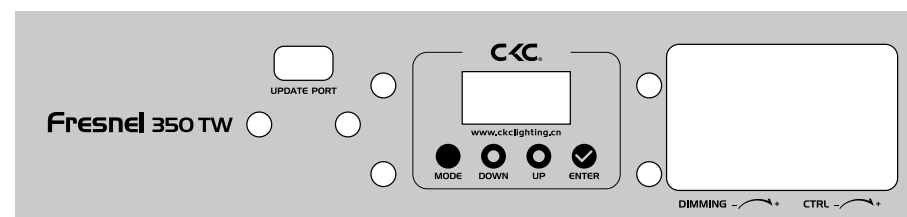
The lighting fixtures are equipped with standard DMX XLR input and output sockets. Please use DMX512 shielded twisted pair signal cables or Category 5 or above network twisted pair cables for connection. The typical connection distance for DMX signal lines is 150 meters. When transmitting signals over long distances, a DMX512 signal amplifier must be added.



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 or 5 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).

**7. Control panel**

7.1 Panel Introduction



- Adopting a OLED display screen;
- Press the MODE key to view or modify fixture function settings, and press UP and DOWN;
- 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);
- 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.

7.2、System menu

Note: The gray color block is the default setting value

	Update Wait... Fresnel 350TW V1.04 Motor Reset Wait...	
MENU Encoder Mode	Disabled	
	Dimmer	
	Int CCT Grn	
	Int Color Sat	
	Manual Control	
	DMX Address	001~512
	DMX Mode	1CH Dimmer / 7CH Dimmer Color / 12CH Standard / 19CH Extended / 10CH CMY / 15CH CMY Extended
	No DMX Status	Hold Last
		Fade to Black
		Standalone
MENU Standalone	Dimmer	0-100%
	CCT	2400-8500K 6000K
	Green Shift	-100%-100% 0
	Virtual Color	Color01-Color53
	Zoom	0-100% 50%
MENU Personality	Master	ON/OFF
	Slave	ON/OFF
	Dim Mode	Standard
		Stage
		TV
		Architectural
		Theatre
	Dim Curves	Linear
		Square
		Square Inverse
		S-Curve
	LED Refresh Rate	900~1200~1500, 2500, 4000, 5000, 6000, 10KHZ, 15KHZ, 20KHZ, 25KHZ
	LED Power Limit	50,60,70,80,90,100%
	Fan Mode	Auto/Silent/High
	Dispaly	DisplayScreen Delay From 00:10 seconds to 05:00 minutes 01:00
		Display Screen Lock OFF/00:10 seconds -05:00 minutes
		Rotate Display 180° YES / NO / Auto

	Service	Passcode:050	Calibration	Red:50~255 Green:50~255 Blue:50~255 ...
			Update Software	YES / NO
			Factory Restore	YES / NO
			Edit RDM UID	Xxxxxx
MENU Information	Life Time	xxxxxx h		
	Last Run Time	xxxxxx h		
	Time Reset	Passcode:038		
	Temperature	Current		
		Max Resettable		
		Reset	Password:038	
	DMX Values	R:000		
		G:000		
		B:000		
		...		
	Product ID's	RDM UID	xxxxxx...	
	Error Logs	Fixture Errors		None
		Reset Error Log	NO/YES	Password:050
	SoftwareVersion	V1.0.4		

7.3、Knob operation

KL Fresnel FC Manual Mode:

Dimmer mode				
Knob	Function	Display	Each level	Default
Dimmer	Intensity	Intensity 0-100%	1%	0%
CTRL	Zoom	Zoom 0-100%	1%	50%

Int CCT Grnmode mode				
Knob	Function	Display	Each level	Default
Dimmer	Intensity	Intensity 0-100%	1%	0%
CTRL	Color Temperature	CCT 2400 - 8500K	100K	6000K
	Green Shift	GRN -100% to +100%	1%	Neutral
	Zoom	Zoom 0-100%	1%	50%

Int Color Sat mode				
Knob	Function	Display	Each level	Default
Dimmer	Intensity	Intensity 0-100%	1%	0%
CTRL	Color	Virtual Color 1, 2, 3, 4...	Single Color	
	Saturation	Sat 0 - 100%	1%	100%
	Zoom	Zoom 0-100%	1%	50%

Manual Control mode				
Knob	Function	Display	Each level	Default
Dimmer	Intensity	Intensity 0-100%	1%	0%
CTRL	Options	[Setting Name] 0 - 100	Zoom/ Strobe / Red /Green / Blue / Amber / Mint	Strobe
	Regulator	[Value] 0 - 100%	1%	0%

8. DMX channel table:

1CH	7CH	12CH	19CH	10CH	15CH	Value	Function
1	1	1	1	1	1	0-255	Dimmer: Intensity 0 to 100%
	2	2	2	2	2	0-255	Dimmer Fine: Dimmer fine
	3	3	3	3	3		Shutter, strobe:
						0-31	Shutter closed
						32-63	No function (shutter open)
						64-95	Strobe effect slow to fast
						96-127	No function (shutter open)
						128-159	Pulse-effect in sequences
						160-191	No function (shutter open)
						192-223	Random strobe effect slow to fast
						224-255	No function (shutter open)
				4	4	0-255	Cyan: Cyan (0-100% Cyan)
					5	0-255	Cyan Fine: Cyan Fine
				5	6	0-255	Magenta: Magenta (0-100% Magenta)
					7	0-255	Magenta Fine: Magenta Fine
				6	8	0-255	Yellow: Yellow (0-100% Yellow)
					9	0-255	Yellow Fine: Yellow Fine
		4	4			0-255	Red: Red(0-100% Red)
			5			0-255	Red Fine: Red Fine
		5	6			0-255	Green: Green (0-100% Green)
			7			0-255	Green Fine: Green Fine

		6	8			0-255	Blue: Blue (0-100% Blue)
			9			0-255	Blue Fine: Blue Fine
		7	10			0-255	Mint: Mint (0-100% Mint)
			11			0-255	Mint Fine: Mint Fine
		8	12			0-255	Amber: Amber (0-100% Amber)
			13			0-255	Amber Fine: Amber Fine
	4	9	14	7	10	0-23	CTO: Open
						24 -85	CTO 2400K - 8500K (see separate sheet)
						86-255	8500K
	5	10	15	8	11		Color Wheel:
						0	Open
						1-179	Virtual Swatch Book (see separate sheet)
							Color Scroll
						180-201	Clockwise,fast → slow
						202-207	Stop
						208-229	Counter-clockwise,slow → fast
						230-234	Open
							Random Slots
						235-239	Fast
						240-244	Medium
						245-249	Slow
						250-255	Open
							Green Shift
						0	Idle
			16		12	1-127	Full Minus Green to Neutral
						128	Neutral White
						129-255	Neutral to Full Plus Green
	6	11	17	9	13	0-255	Zoom: Zoom adjustment from small to big
							Dim Modes
						0-20	Standard

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			18		14	21-40	Stage
						41-60	TV
	7	12	19	10	15	61-80	Architectural
						81-100	Theatre
						101 - 255	Default
							Control:
						0-29	Idle
						30-39	Fan Mode Auto
						40-49	Fan Mode Silent
						50-59	Fan Mode High
						60-99	Idle
						100-168	Refresh Rate (Hz)
						100	900
						101	910
						102	920
						103	930
						104	940
						105	950
						106	960
						107	970
						108	980
						109	990
						110	1000
						111	1010
						112	1020
						113	1030
						114	1040
						115	1050
						116	1060
						117	1070
						118	1080
						119	1090
						120	1100
						121	1110
						122	1120
						123	1130
						124	1140
						125	1150
						126	1160
						127	1170

						128	1180
						129	1190
						130	1200
						131	1210
						132	1220
						133	1230
						134	1240
						135	1250
						136	1260
						137	1270
						138	1280
						139	1290
						140	1300
						141	1310
						142	1320
						143	1330
						144	1340
						145	1350
						146	1360
						147	1370
						148	1380
						149	1390
						150	1400
						151	1410
						152	1420
						153	1430
						154	1440
						155	1450
						156	1460
						157	1470
						158	1480
						159	1490
						160	1500
						161	2500
						162	4000
						163	5000
						164	6000
						165	10000
						166	15000
						167	20000

Appendix 1:

Appendix 2:

Value	Color Temperature
24	2400
25	2500
26	2600
27	2700
28	2800
29	2900
30	3000
31	3100
32	3200
33	3300
34	3400
35	3500
36	3600
37	3700
38	3800
39	3900
40	4000
41	4100
42	4200
43	4300
44	4400

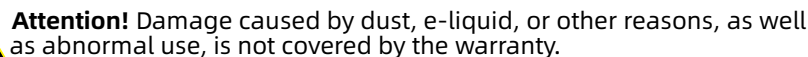
[illegible]

45	4500
46	4600
47	4700
48	4800
49	4900
50	5000
51	5100
52	5200
53	5300
54	5400
55	5500
56	5600
57	5700
58	5800
59	5900
60	6000
61	6100
62	6200
63	6300
64	6400
65	6500
66	6600
67	6700
68	6800
69	6900
70	7000
71	7100
72	7200
73	7300
74	7400
75	7500
76	7600
77	7700
78	7800
79	7900
80	8000
81	8100
82	8200
83	8300
84	8400
85	8500



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.



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

- 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;

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
fan stops rotating	Check if the fan leads are installed properly or disconnected	Re connect
	Check if the fan is damaged	Replace
	Check if there are any other interfering objects within the operating range of the fan	Adjust
 Attention! The above analysis is for abnormal reference only. Non professionals are not allowed to disassemble and repair the machine		

