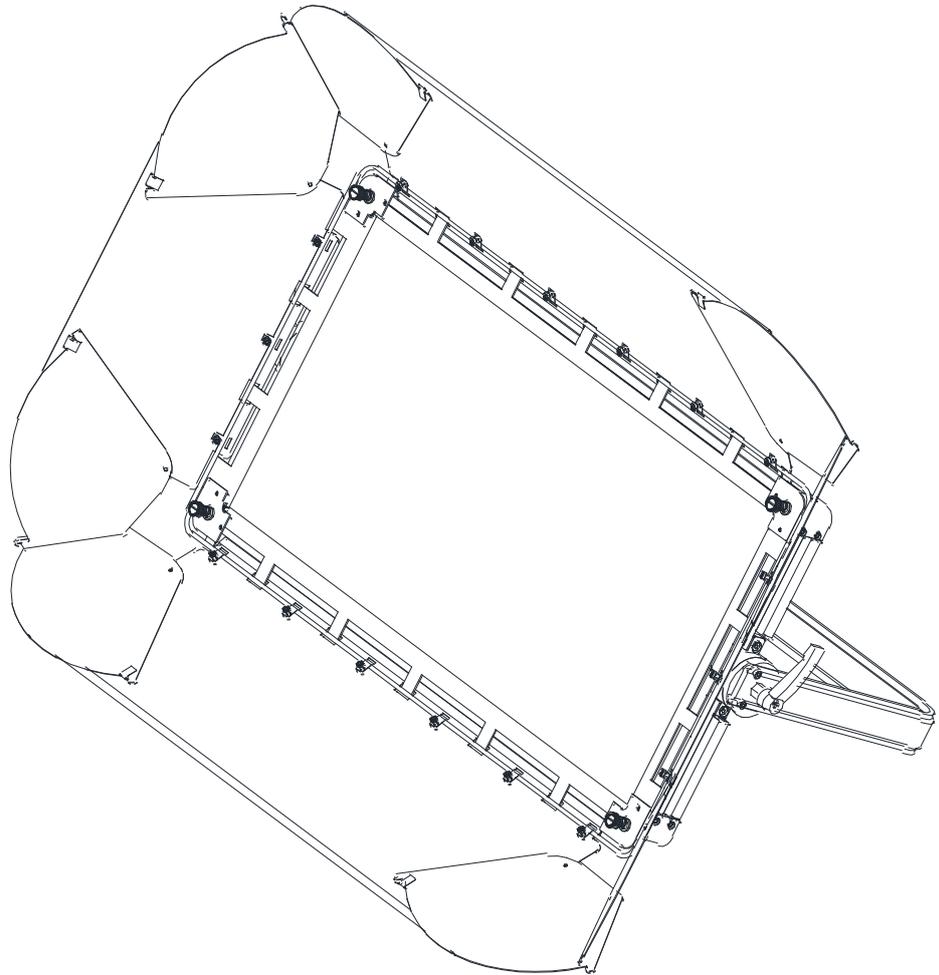


# GTD



**GTD-LP200**

**User Manual**

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P/N: 1502011117

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# 1. Safety instructions

Before using the fixture, read the latest version of the product user manual, paying particular attention to the safety instructions. Please check [www.gtd-lighting.com](http://www.gtd-lighting.com) for the latest revision/update of the user manual.



The manufacture of this fixture, are not responsible for damages, resulting from misuse of this fixture, due to the disregard of the information printed in this user manual.



**DANGER!**

Hazardous voltage. Risk of lethal or severe electric shock



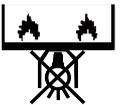
**WARNING!**

Wear protective eyewear. Never look directly into the light source.



**WARNING!**

Burn hazard. Hot surface. Do not touch.



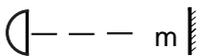
Only to direct mounting on non-combustible surfaces.



Indoors use only.



Replace all cracked glass shields.



Minimum distance to lighted objects.

$t_a \dots ^\circ\text{C}$

Maximum ambient temperature.

$t_c \dots ^\circ\text{C}$

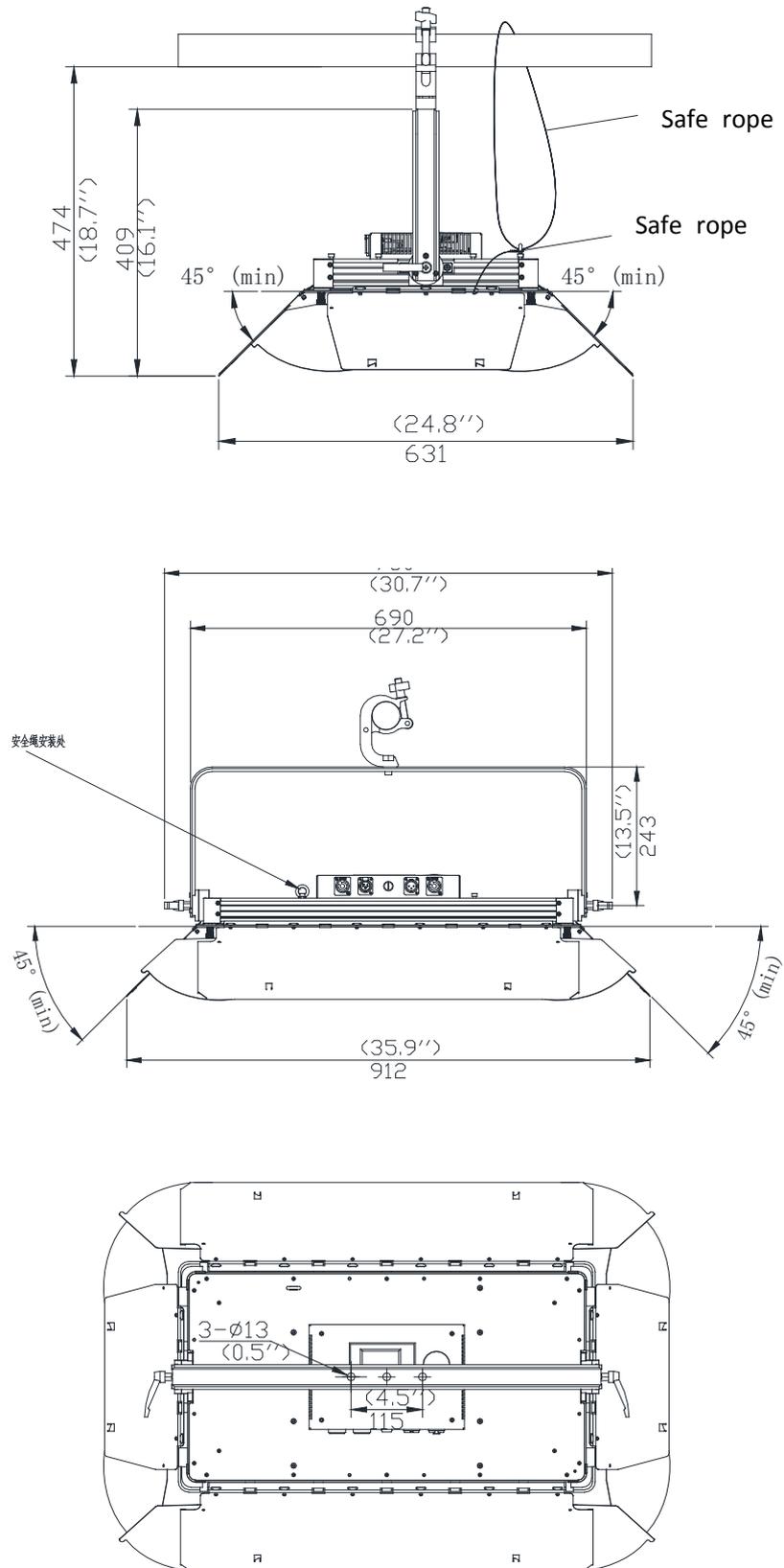
Maximum temp of the external surface.

## **General guidelines**

- The protection rating of this product IP20.
- Never open this fixture while it is in use.
- The fixture should be kept clean. DO NOT operate the fixture in extreme heat or dusty environments. Avoid contact with chemical liquid.
- Minimum distance to lighted objects must be 16.4 feet (5m).
- Maximum temp of the external surface 167°F (75°C).
- Maximum ambient temperature 113°F (45°C).
- Minimum distance of inflammable materials from the surface 1.6 feet (0.5m).
- Lamp should be replaced if damaged or distorted in shape due to extreme heat.
- Cover, prism or LCD Menu Function Display with visible damages such as cracks or scratches must be replaced to ensure performance of the fixture.
- Disconnect the fixture from power before changing any parts or accessories.
- Basic insulation should be maintained between the controllable device and the product power supply.
- Make sure that the installation area can hold a minimum point load of 10 times the weight of all installed fixtures, clamps, cables, auxiliary equipment, etc. Make sure that the cover, clamps and locks are undamaged. Certified safety cables must always be used when installing the fixture.
- The fixture is only intended for installation, operation and maintenance by qualified professional. Instructions stated in the manual must be complied.
- The fixture must be kept in a well-ventilated place at least 50 cm away from any wall surface. Check if the fans or ventilation openings are unblocked.
- This fixture uses discharge lamp. Avoiding reduce the lamp's life, wait at least 15 minutes after powering off to allow the unit to cool down before handling.
- To ensure operational safety, broken or damaged cables and light source can only be fixed or replaced by certified technicians, certified local distributors or the manufacturer.
- Do not stick filters or other materials onto the lens. Do not modify the fixture or install other than GTD manufactured parts.
- For questions regarding safety operation, please contact our technical personnel or call the service hotline +862061808296.

## 2. Production instructions

### 2.1 Dimensions



## 2.3 Accessories

Item	Qty	Unit	Remark
User Manual	1	Pc	--
Clamps	1	Set	117*80*24 $\phi$ 50*10KG
Safety cable	1	Pc	$\phi$ 3*80cm& $\phi$ 1*15cm with hook Material: Steel
3-pins signal line	1	Set	1.5m*2.5mm <sup>2</sup> connect blue plug

# 3. Packing and shipping

## 3.1 Unpacking

### Notes

All products are quality controlled before they dispatched to customers. If the fixture is damaged during delivery, the customer must notify the shipper and manufacturer to file a damage insurance claim. Photographic evidence of the damage must be provided.

**Cardboard box(specification: 840\*485\*185 mm):** Open the box and take out the wnoie set or packaging foam which are contained both the fixture and its accessories. Remove the foam from the top, put away the accessories, and then take out the fixture wrapped in the plastic bag.

## 3.2 Packing after use

1. Switch off the fixture and wait for at least 5 minutes before disconnecting it from AC power. Cool down the fixture for at least 15 minutes before packing.
2. Flight case: Wrap the fixture in plastic bags. Gripping the handle and then place it in the flight case along with all the accessories carefully. Close the cover lid. The wrap page are not allowed over 3 layers. Do not upside down.
3. Cardboard box: Wrap the fixture in plastic bags. Put it in the packaging foam along with all the accessories. Place the other set of packaging foam on top then put it carefully in the cardboard box.

# 4. Installation

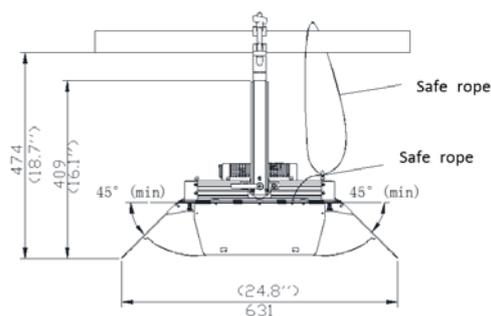
## 4.1 Clamps installation

The fixture can be placed on the stage or mounted on the truss which faces any direction. Attach the clamps to the mounting position on the base of the fixture.

**Warning:** Use two clamps when mounting the fixture. Turn the screws attached to each clamp a 1/4 turn clockwise to lock. Always remember to use the safety cable which goes through the mounting hole on the base. Do not attach the safety cable on the handle.

## 4.2 Device installation

1. Make sure there is no damage on the clamps or safety cables before installation.



2. The clamp is mounted on the chassis of the fixture. Horizontally insert the clamp into the mounting holes of the chassis. Fasten the clamp tightly by a 1/4 turn clockwise. Fix another clamp in the same way.

3. Check if pan is locked before connecting the unit to AC power.

# 5. Power/ Control connection

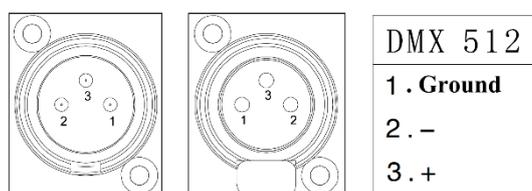
## 5.1 Power connection

Connection method:

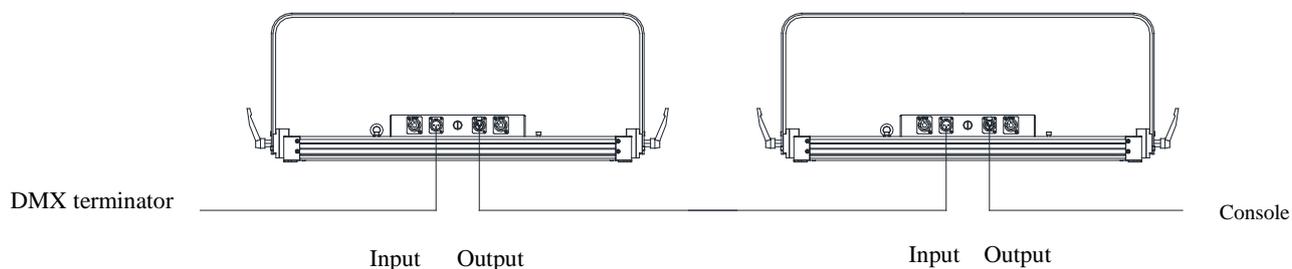
- L (Live) Brown wire
- E (Earth) Yellow / Green bi-color wire
- N (Neutral) Blue wire
- The voltage and frequency of the power source must be in compliance with the ones | **Safety cable** ture. It is strongly recommended that each fixture are to be connected to the power source separately so that they can be switched on / off individually.

## 5.2 Control connection

The fixture has 3-pin XLR connectors for DMX data input and output as shown below. Connection between the console and fixture, and between fixtures must be made with 2 core screened DMX signal cable. Maximum connecting distance of signal cable is 150 meters. Additional DMX512 signal-amplifier is recommended for longer distance.



Connect the Console's DMX OUTPUT to the first fixture's DMX INPUT, then the first fixture's DMX OUTPUT to the second fixture's DMX INPUT and so on. It is recommended not to connect more than 32 units on a single DMX universe. On the last fixture's output connect a DMX terminator. (The terminator is a 3-pin XLR connector with a 1/2W and 120Ω resistor between the pin 2 and pin 3) as shown below:



### 5.3 Testing

Connect the fixture to AC power. Check if the lamp is on and the fixture is independently controllable before putting into operation.

## 6. Control panel

### 6.1 Panel instruction



- The control panel features touch-sensitive buttons and LCD digital display for quick and easy setup of address code and functions menu.
- Switch the button can select the function menu.

## 7. Technical specification

- **Optical**

Light source: LED 0.5W

Expected average lifetime: 50000 h

Color temperature correction: 2800K~6000K

Lumens: 13000lm

Beam: 110° ( 10% )、70° ( 50% )

CRI: 97

- **Electrical**

Power input, nominal: AC 100-240V 50/60Hz

Max. Power consumption: 230W

Max current:2.3A, PF: 0.94

Power supply unit: wide range electronic SMPS

Main fuse: 6.5A

Power input: Self-contained power cord

DMX data input/output: Chassis 3-pin

- **Control and programming**

Control channels (DMX): 11/15

Protocol: DMX-512 RDM

Display: Nixie tube

- **Physical / Installation**

Weight: 9 Kg (19.8 lbs.)

IP rating: IP20

Material: Aluminum, steel, plastic

Mounting points: fixed folding lamp hook + attachment points for safety wire

- **Dynamic effects**

Pan/Tilt movement: 540°/270°, adopting a function which resets 32bit accurately and automatically

Strobe: 1-25Hz, strobe randomly, pulse randomly, strobe synchronously and asynchronously

Dimmer: 0-100%, electronic linear dimming

- **Thermal**

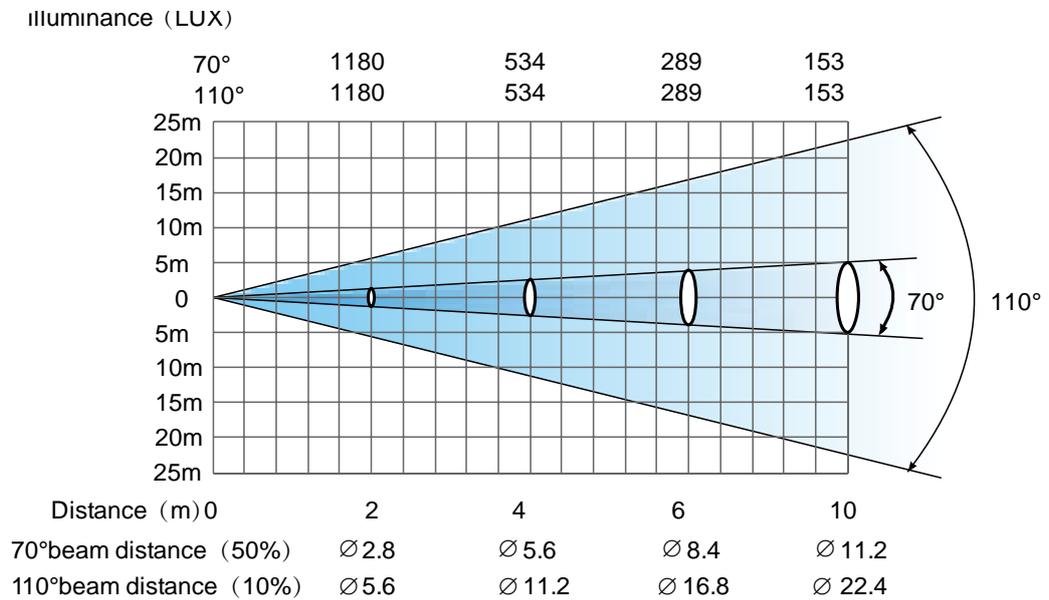
- Operating range: 14°F - 113°F ( -10°C - 45°C)
- Startup range: -13°F - 113°F( -25°C - 45°C)
- Storage range: -40°F - 140°F( -40°C - 60°C)
- Cooling: Active fan
- Humidity: ≤85%

- **Certification and Safety**

**EMC:** EN 55103-1:2009, EN 55103-2:2009, EN 61000-3-2:2006+A2:2009, EN 61000-3-3:2013, GB/T 17743-2007, GB 17625.1-2012

**Safety:** EN 60598-2-17:1989/A2:1991, GB 7000.1-2015, GB 7000.217-2008

- **Photometric**



- **Other features**

- Enhanced stability of the fixture due to the wide input voltage AC/DC switching power supply which both reduces the impact of power and voltage fluctuations, and removes the restriction of voltage and frequency variations in different countries.
- Automatic energy saving: when the shutter or CMY is closed, power consumption will be reduced automatically with the photoelectric tracking induction technology.
- Sleep mode: uses the most advanced technology to activate sleep mode remotely. When the fixture is disconnected from signal, the sleep mode is enabled automatically to make it more stable and safer. Sleep time can be customized.
- Power setting: built-in continuous rechargeable battery, allowing setting functional data via LCD interface without power connection.
- Communications Design: DMX wired/wireless transmission, bidirectional-control technology, upgrade the software quickly and conveniently by using DMX cable.
- Thermal design: The wind drainage and intelligent temperature monitoring technology can monitor lighting's state : on /off. It can adjust the thermal design by the position's temperature of lighting so that the temperature can be controlled.

## 8. Menu structure

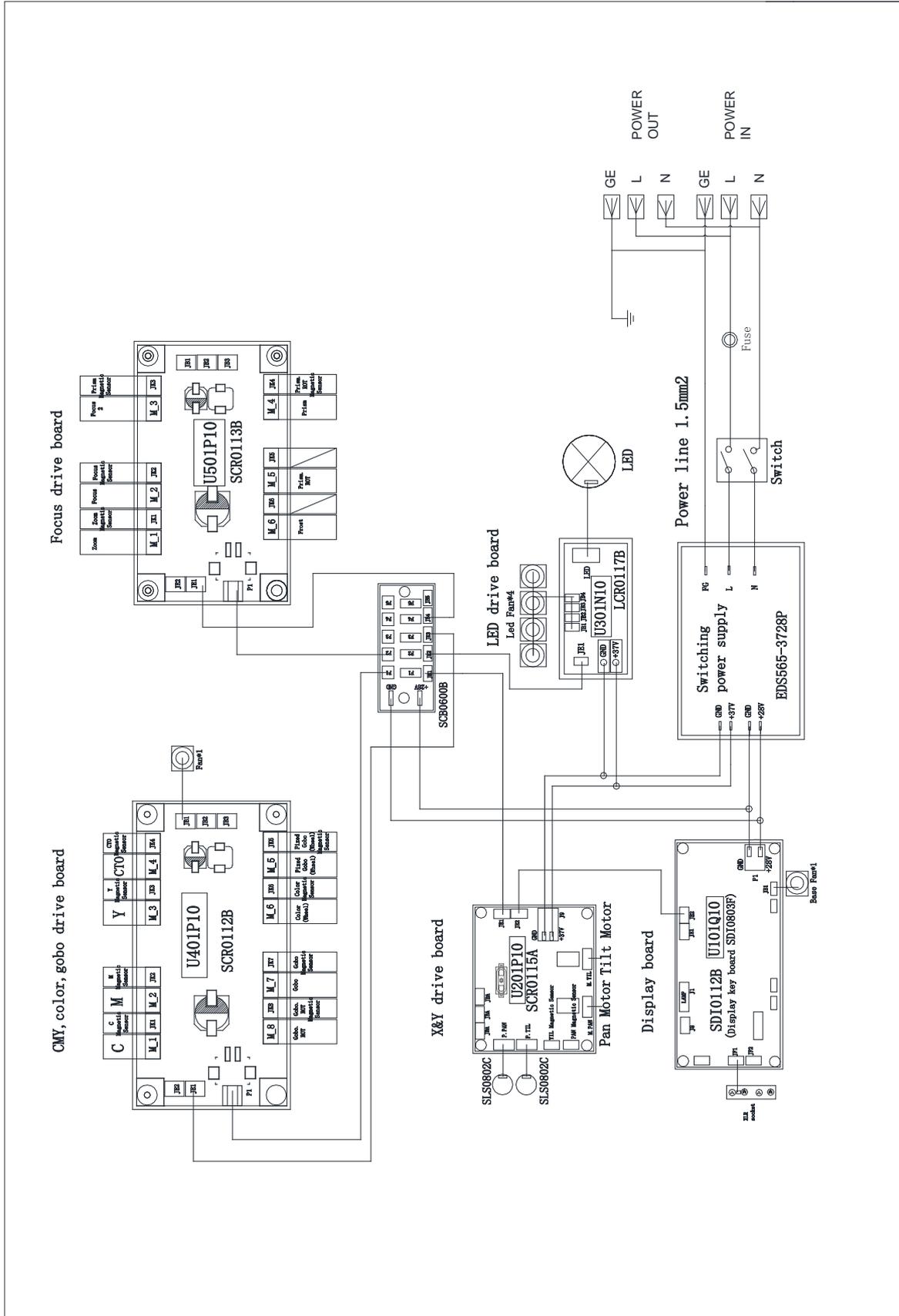
Level 1	Level 2	Level 3	Level 4	Info
<b>Run setting</b>	Address:001~ XXX			Setting the DMX address
<b>Device Info</b>	Time Info	Since power on Total Time Return	XXXXXX Hour XXXXXX Hour	Since power on time Product total run time
	Temperature	XXX 'C/'F		Body temperature
	Software Version	X.X		The software version
	Return			Return to the previous menu
<b>System Setting</b>	Status Setting	No Signal Status Standby Time Return	Off/Hold/Auto Disable/1~120Min, <b>30</b>	The status while no signal Standby time Return
	Fan Speed	Smart Control High Speed Low Speed		Auto fans speed Fans high speed Fans low speed
	Display Setting	Backlight Time Key Lock Lightness Language Screen auto Return	1~80 Min/Disable Enable/Disable 15~100% <b>80%</b> Chinese/English off/on/auto	Backlight off time Press <menu> 3s to unlock Back lightness of screen Change the language Screen change Setting Return to the previous menu
	Temperature Unit	<b>Celsius</b> Fahrenheit		Temperature unit
	Value Default	Dimmer Color Temp Color Temp F Return	Dimmer =XXX Color Temp =XXX Color Temp F =XXX	The default value
	Restore Default	Yes/ <b>No</b>		Restore to default value
	Select Device	- Password- XXX(99)	GTD LP200 GTD LP200 A GTD LP200 B .....	Select the model of the device
<b>Channel Adjust</b>	Dimmer Color Temp Color Temp F Return	Dimmer =XXX Color Temp =XXX Color Temp F =XXX		Manual control
<b>Retrun</b>				Return to the previous menu

\*Settings highlighted in light grey are default value

## 10. DMX Protocol

DMX mode	Name	DMX value		DMX percentage		Function	Default DMX Value
Standard (3ch)							
1	Intensity	0	255	0.0%	100.0%	No light→ Full light	0(0%)
2	Color Temperature	0	15	0.0%	5.9%	2800K	0(0%)
		16	30	6.3%	11.8%	3000K	
		31	45	12.2%	17.6%	3200K	
		46	60	18.0%	23.5%	3400K	
		61	75	23.9%	29.4%	3600K	
		76	90	29.8%	35.3%	3800K	
		91	105	35.7%	41.2%	4000K	
		106	120	41.6%	47.1%	4200K	
		121	135	47.5%	52.9%	4400K	
		136	150	53.3%	58.8%	4600K	
		151	165	59.2%	64.7%	4800K	
		166	180	65.1%	70.6%	5000K	
		181	195	71.0%	76.5%	5200K	
		196	210	76.9%	82.4%	5400K	
		211	225	82.7%	88.2%	5600K	
226	240	88.6%	94.1%	5800K			
241	255	94.5%	100.0%	5900K			
3		0	65535	0.0%	100.0%	Color temperature fade, fine(LSB)	

# 11. System wiring diagram



# 12. Maintenance and Troubleshooting

## 12.1 Cleaning and maintenance

It is required that the fixture should be kept clean and well maintained to ensure its reliability. Its lifespan mainly depends on the working environment and proper operation. Should you have any questions, please consult a technical engineer of GTD Lighting.

 Notes: Damage resulted from dust, smoke, oil or improper use is not covered by warranty.

 Notes: Disconnect the fixture from AC power, and let it cool down for at least 15 minutes before opening the housing. Make sure to use a soft cloth to clean the optical components, and be careful, as the coating is easily scratched. Do not use any organic solvent such as alcohol to clean the reflector mirror, dichroic color filters or housing of the fixture.

- If the lens is cracked or otherwise damaged, replace it immediately.
- If the lamp becomes damaged or deformed in any way it must be replaced.
- If the light from the lamp appears dim, this normally indicates that it is reaching the end of its life span and should be changed at once. Aged lamps run to the extremity of their life might explode.
- If fixture does not function, check the fuse on the power socket of the fixture. Replace the fuse of the same specification if it is blown.
- The fixture is equipped with thermal-protection device that will switch off the lamp in case of overheating. If this happens, please check that the fans are not blocked, and clean them if they are dirty. Check whether the fans are operational. If not, call a qualified technician.

## 12.2 Troubleshooting

Problem	Possible Cause	Suggested Correction
No response after connected to A/C power	Power switch not turned on.	Turn on power switch.
	Take out the fuse and check if it is blown.	Locate the blown fuse. Remove the broken fuse. Insert areplacement fuse of the correct amperage
	Abnormal A/C input (A/C power socket, power cables, luminaire power socket).	Replace AC power socket and power cables, and then adjust power socket for proper connection.
	No DC voltage from switching power supply.	Check if the switching power supply has DC voltage output. Replace the switching power supply.
No response or wrong response to the commands of the control system	DMX cables disconnected from fixture's DATA IN connector.	Connect DMX cable to the fixture's DATA IN connector.
	Open circuit or short circuit fault in the DMX cables.	Replace DMX cables as required.
	Wrong DMX address for the fixture in the control system.	Ensure the address in "Run setting > Address Setting >Address" of the fixture is consistent with the address in the control system.

<b>Problem</b>	<b>Possible Cause</b>	<b>Suggested Correction</b>
	Misuse in “Channel setting > Channel Mode of the fixture.	Choose the channel mode in “Channel setting > Channel Mode” of the fixture as required by the user
	Malfunctioning of DMX cannon input/output connectors. No input/output voltage to the main control board of the fixture.	Troubleshooting the DMX XLR signal plate of the fixture,replace the main control board of the fixture.
The lamp does not start when switch is turned on	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary
	Whether the function of the relay board is intact, whether the signal is normal or not.	Repair or replace.
	Shorted leads between ballast and the lamp	Replace components as required.
	Incorrect ballast output.	Check ballast output to determine if it conforms to lamp requirements. If voltage and current do not stabilize in five to ten minutes warm-up time, ballast output is incorrect and adjustment should be made. Check capacitor wiring, if visibly available, to determine if capacitors are properly wired.
	Incorrect triggers output.	Replace triggers.
The lamp is off unexpected	The fixture is in sleep mode	Should the fixture is not in active use for “standby time”, the sleep mode is enabled automatically to make it more stable and safer, sleep time can be customized.
	Lamp has been operating: cool down time insufficient.	Environmental conditions such as extreme temperatures will have the fixture stop working, the lamps will require a period of time to cool and re-establish optimum starting conditions. Restart time varies with the degree of ventilation built into it, ambient temperature, and draft conditions.
	Overheat ballast resulting in premature failure or damaged ballast.	The ballast incorporate internal automatic-resetting thermal protection, which deactivates the ballast should it overheat. Normal operation resumes once the ballast has cooled sufficiently. Burned-out or failing lamps, or high temperatures in or around the fixture, can cause

<b>Problem</b>	<b>Possible Cause</b>	<b>Suggested Correction</b>
		the ballast to overheat, so we need solve the problem and replace components as required
	Thermostat damaged.	Replace.
Shaking, wrong position, and out of control gobo wheel	No function the connector between gobo wheel motor and drive, loose, damaged, or broken cables connecting the gobo wheel and drive.	Reconnect the gobo wheel motor to the drive, and replace cables as required.
	The gobo wheel motor's drive IC on the PCB might be out of condition.	Replace the drive having the same software version as required.
	Dislocated magnetic tube and positioning magnet, or damaged magnetic tube.	Calibrate the position of the magnetic tube to the positioning magnet, and replace magnetic tube as required
	Shaking motor, wrong rotation angle, losing step or damaged motor	Replace the motor as required.
Decreased brightness, uneven pattern projections	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary
	The midline of the lamp is not aligned with the center point of the effect assembly (consisting of the rotating gobo wheel, static gobo wheel, color wheel, strobe, prism, and frost), focus module, and object lens.	Reinstall the lamp. Adjust the lamp position until the midline of the lamp is aligned with the center point of the effect assemblies (consisting of the rotating gobo wheel, static gobo wheel, color wheel, strobe, prism, frost, the focus adjusting module, and the object lens).
	Excessive dusts or smudges on the effect assembly, focus module and objective lens.	Follow the instructions stated in this user manual to clean the effect assembly, focus module and objective lens.
	Damaged or deformed effect assembly, focus module or objective lens.	Replace the damaged or deformed components
Wrong color	Normal end of lamp life	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary
	Excessive dusts or smudges on the rotating gobo wheel or color wheel.	Follow the instructions stated in this user manual to clean the rotating gobo wheel or color wheel.
	Rotating gobo wheel, color wheel with coating wearing off, damages or deformation	Replace the worn-off, damaged or deformed rotating gobo wheel and color wheel

<b>Problem</b>	<b>Possible Cause</b>	<b>Suggested Correction</b>
Non-clear shape	Excessive dusts or smudges on the rotating gobo wheel or color wheel	Follow the instructions stated in this user manual to clean the rotating gobo wheel or color wheel.
	Excessive dusts or smudges on the focus module or objective lens	Follow the instructions stated in this user manual to clean the focus module or objective lens
	Damaged or deformed focus module or objective lens.	Replace the damaged or deformed focus module or objective lens.

### **13. Spare parts list**

Name	P/N	Qty	Notes
display panel	5802020078A	1	SDI3002C 4 1 without 451MCU
AI-Substrate	5802010071A	6	LJB3002B 6 1
LED drive board	5802030127A	1	LED 3004B-1 6 1



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