

LS 150 Water
PR-6810

The user manual contains important information about the safe installation and use of a projector. Please read and follow these instructions carefully and keep the manual in a safe place for future reference.

INDEX

1. SAFETY AND WARNINGS	3
2. INSTUCTIONS	4
•CLEANING AND MAINTENANCE	4
•TROUBLESHOOTING	4
3. APPEARANCE	5
4. INSTALLATION	5
•RIGGING	6
•PLACE A UNIT ON A FLAT SURFACE	6
•TRANSPORTATION	6
•POWER CONNECTIONS	6
•DMX CONTROL CONNECTION	6
•DMX TERMINATOR	7
5. SETUP AND CONFIGURATION	7
•FRONT PANEL OPERATION	8
•DMX START ADDRESS	8
•STAND-ALONE MODE	8
•MASTER/SLAVE MODE	8
6.OPERATION MENU	9
7. DMX PROTOCOL	10
8.TECHNICAL DATA	11
9.CIRCUIT DIAGRAM AND PCB CONNECTIONS	13
•CIRCUIT DIAGRAM	13
•PCB CONNECTIONS	14
10.COMPONENT ORDER CODES	15

ACCESSORIES

The following items are supplied with the projector and please check:

Name	Quantity	Unit	Remark
clamps	1	Pc	
Power cord	1	Pc	
XLR connector	1	Set	male and female
Safety cord	1	Pc	
User manual	1	Pc	
Transparent Cover+ seal+ screws ×6	1	Set	Optional

Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of the manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them. Every unit is tested completely and packed properly by the manufacturer. Please make sure the packing and / or the unit are in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. Any damage caused by improper use will not be assumed by the manufacturer and / or dealer.

Any future technical change in the user manual won't be with any further notice.

Note: For the products made by Guangzhou PR lighting Ltd, the warranty for the whole product is one year starting from the delivery date but the light source is not within the warranty.

1. SAFETY AND WARNINGS



NOTE

Before a projector's installation, power-on, operation and maintenance, please carefully read the safety information hereinafter!

The following safety signs are used in the user manual.

						
Warning	User Manual	Electrical shock	Goggles	Protective Gloves	Flames	High Temperature



- When unpacking , check if there is transportation damage before using the projector. Should there be any damage caused by transportation, consult your dealer and do not use it.

- The manufacture is not responsible for loss caused by the user not following the manual or changing the projector as he/she likes
- Please be noted that the damage caused by changing the projector at will is not warranted.
- Do not hesitate to contact the dealer or the manufacturer if any questions or advice.

- The unit can be used indoors and outdoors and for its IP rating .please refer to Technical Data section of this user manual.



- Use only in dry locations. Keep this unit away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.

- It's forbidden to make the unit with lower protection level directly or indirectly contact water or other liquids.
- The projector should be kept away from high temperature, fire, electrical surge, vibration and strong light while being operated

- The projector is only intended for installation, operation and maintenance by qualified personnel. And the operation must strictly follow the procedures in the manual

- No repairable parts in the projector and do not open covers for maintenance by yourself.



- Don't look straightly into the light sources especially for epileptics, otherwise eyes will be burned.

- Do not connect this device to any type of dimmer pack

- lens and other optical parts shall be replaced immediately if they have deformed or been damaged, otherwise the light output will be compromised.



- Before operation, please confirm that all covers(housing) are on and screws tightened. It's forbidden to use a projector while covers(housing)are off

- Keep the lamp clean and do not touch it with bare hands.

- While operating it, wear protective items.



- Any electrical connection must be carried out by a qualified person .

- Before installation, please confirm the voltage supplied matches what is required for the projector

- Each projector must be properly earthed and installed as per related electrical standards.

- Do not use power cord with its insulator damaged and connect the power cord with other cables.

- If the projector is not used or under cleaning,, please hold the plug and unplug it. Do not unplug it forcefully or by pulling the power cable.

- All power cords must conform to related safety and regulations

- While being operated, the projector should not be under rains or in humidity.

- Do not switch on and off the projector constantly in very short intervals, otherwise the light source's and other

electrical parts' life will be shortened .



- There are safety cord holes at the bottom of the base of a projector. In view of safety, please run the safety cord supplied through the safety cord holes for safety support.
- Before any installation, maintenance and cleaning work, please ensure the projector is disconnected from power mains.



- Under normal temperature, the temperature of the housing will be 55°C; after being stable, the unit's surface temperature will be 70°C
- While the lamp is stricken for the first time, there will be smoke and strange smell. It's normal and does not mean the projector has some defects.
- While operated, do not touch the metallic housing. It is very hot during operation.



- Do not mount the projector directly on inflammable surface.
- Do not project the beam straightly on combustible items and the minimum distance between the projector and illuminated items is 10m.
- A projector should be installed with good ventilation and the minimum distance between the projector and walls is 50cm. At the same time, please ensure the fans and air inlets and outlets are workable.

2. INSTRUCTIONS

•CLEANING AND MAINTENANCE

For the units with optical lens, because of the accumulation of the smoke, oil and dust on lens, the light output will be compromised. For the reliable use of the unit, it is very necessary to keep it clean. The unit is IP65 rating waterproof device. Unless approval by some professional technician for necessary internal component replacement, it's forbidden to dismantle the unit.

Cleaning frequency is to be decided by operations and its environment. Use soft cloth and normal detergent for glass for cleaning work. It's advised external optical system be cleaned every 20days. Keep lens clean and do not touch optical parts with bare hands.



- Before any maintenance and cleaning, please ensure the project is off the power
- Only qualified person is allowed to do maintenance
- During maintenance and before maintenance, the projector must be off power.



- To avoid internal damage, sun light or other light mustn't penetrate into the projector via front lens whether it runs or not
- Do not use alcohol or other organic solvent to clean the housing to avoid damage.
- Do not use any solvent with chemical elements to clean color filters or hot mirror.

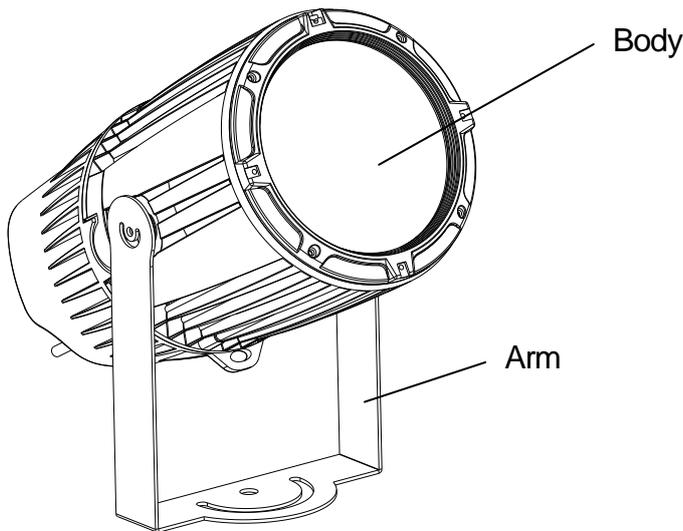
•TROUBLESHOOTING

PROBLEM	ACTION
The projector doesn't switch on	<ul style="list-style-type: none"> ➢ Check the power cord connection ➢ Power Switch fails or is not connected well, call a professional technician for repairing and checking ➢ Control board is not connected normally, call a professional technician for repairing and checking ,
The project can be turned on, but the LED lamps can't be on	<ul style="list-style-type: none"> ➢ LED lamp board is not connected well, call a professional technician for repairing and checking
The LED lamps can be on, but not controlled by DMX	<ul style="list-style-type: none"> ➢ Check if DMX Start Address is properly set ➢ Check if XLR cable fails or not

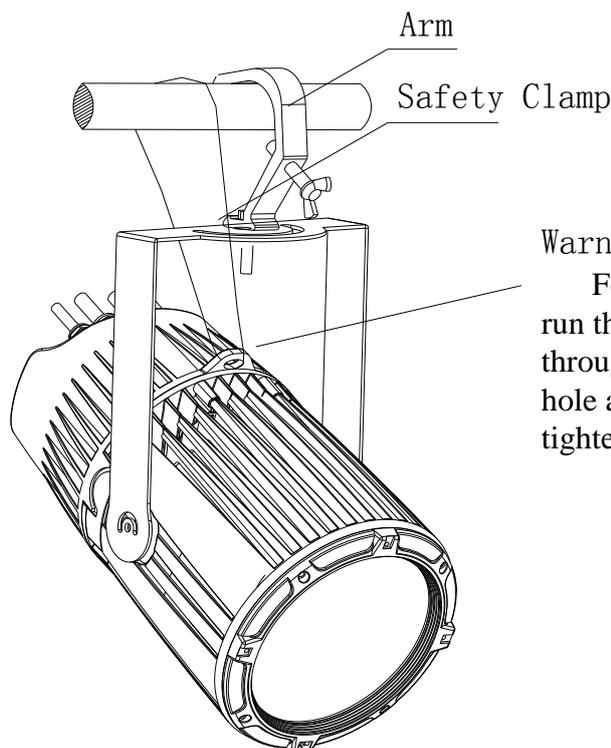
The brightness decreases obviously

➤ Ambient temperature is too hot which makes the projector too hot, please take appropriate ventilation measures

3. APPEARANCE



4. INSTALLATION



Warning:

For safety, please run the safety cord through the safety cord hole and ensure it is tightened .

●RIGGING

Take 1 clamp and 1 safety cord out from the package and tighten the clamp with the arm, and then mount the whole unit on the truss, tighten the clamp's retainers to keep the unit stable. (See the **WARNING** on the underside of the base as shown above) **To pass the SAFETY CORD through the ARM for safety!** Always ensure that the unit is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure that you are going to mount the unit to is secure and strong enough to support the weight of the unit. Loosen the big knob and adjust the head's angle for the effect desired and then tighten it. The installation is completed. (if the unit is with wireless control, while being hung, the antenna should face down)

●PLACE A UNIT ON A FLAT SURFACE

Before placing a unit on a flat surface, loosen the small knob with the support and make the angle between the arm and the support 60degrees. Tighten the small knob. Loosen the big knob and adjust the angle between the arm and unit as desired and then tighten it. (If the unit is with wireless control, after the unit is placed on a flat surface the antenna should face up)

● **TRANSPORTATION**

Before transportation, tighten both knobs after the arm and support are overlapped.



WARNING:

- The projector **MUST** be lifted or carried by the **HANDLES** instead of clamps.
- For safety the safety cord should afford 10 times the Projector’s weight.

● **POWER CONNECTION**

Connect the power cord as follows:

- L (live) =brown
- E (earth) =yellow/green
- N (neutral) =blue

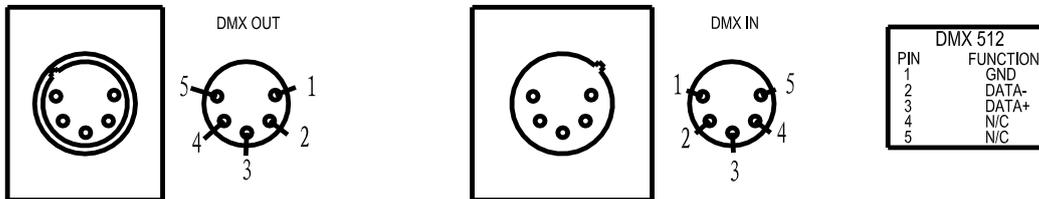
Before power connection, please ensure the power supplied must match what the nameplate says. It is recommended that each projector be connected with power separately so that they may be individually switched on and off.

Note: If projectors are connected in series, please connect **POWERIN** port of the 1st projector with the Power Mains, then connect its **POWER OUT** with **POWER IN** of the 2nd projector, and so on till all fixtures are connected. If the voltage supplied is 200V-240V, the maximum projectors connected is 8pcs, if it is 100V-120V, the maximum is 4pcs. The diameter of the cores of the wires for the Power in/out cables must be equal or bigger than 2.5mm².



- The earth wire(yellow/green) must be connected to the ground. And electrical connection must be in accordance with the standards concerned.
- If any questions about the electrical installation, do not continue but consult a qualified electrician.

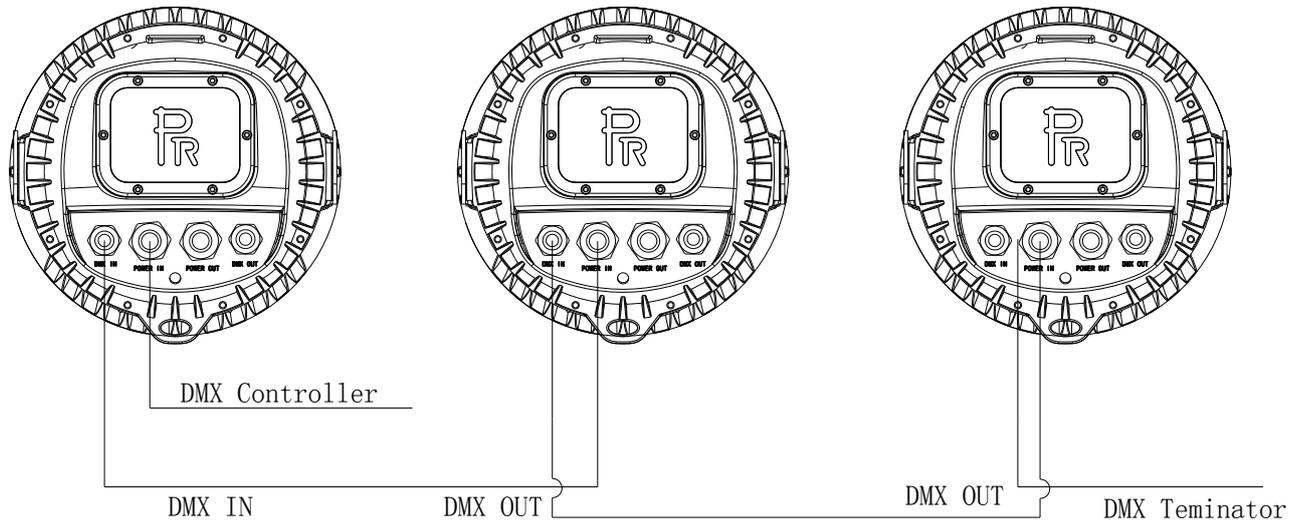
● **DMX CONTROL CONNECTION:**



Connection between controller and projector and between one projector and another must be made with a twin-screened cable, with each wire having at least a 0.5mm in diameter. Connection to and from the projector is via cannon 5 pin (which are included with the projector) or 5 pin XLR plugs and sockets. The XLR's are connected as shown in the figure above.

Note: care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. XLR plugs and sockets mustn't be connected in any way other than mentioned in the above figure. The unit accepts digital control signals in protocol DMX512 (1990).

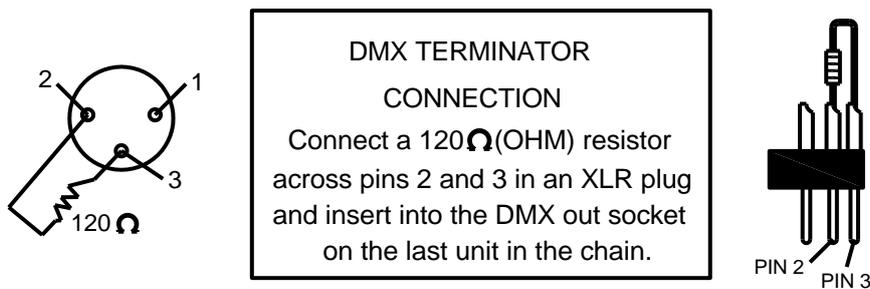
Connect the controller’s DMX output to the first fixture’s DMX input, and connect the first fixture’s DMX output to the second fixture’s DMX input and connect the rest fixtures in the same way. Eventually connect the last fixture’s DMX output to a DMX terminator as shown in the figure below.



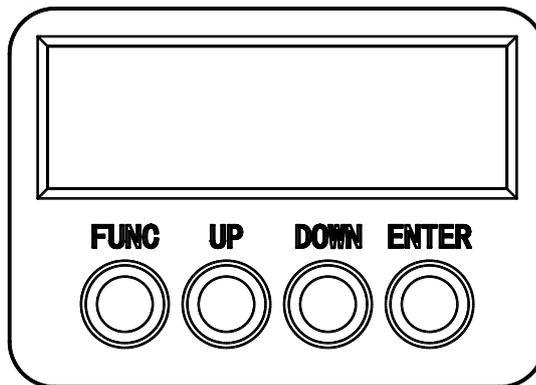
● **DMX TERMINATOR**

In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.

The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.



5. SETUP AND CONFIGURATION



● **FRONT PANEL OPERATION**

To browse through or modify the projector's functions, press key **ENTER** for more than 3 seconds to unlock the control panel and enter the menus. To set or browse through the projector's functions, press key **UP** or **DOWN**. Press the key **ENTER** to enter the submenus and the current parameters will be displayed while flashing. Press key **UP** or **DOWN** to change values (plus or minus). Press key **ENTER** to save your changes and enter into the upper level menu while flashings stop; Press key **FUNC**, it will return to the upper menu (parameters not saved) or browse through 1st level menus; Press key **FUNC** for 1 second or none key is pushed for 1 minute, the menu will be escaped and current operation mode displayed. If DMX signal is available, LED indication is on. Otherwise it is off.

●DMX START ADDRESS

Each Projector must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to “listen” to the digital control information being sent out from the controller. The Unit has 1 DMX mode. It has 8 channels, so set the No. 1 projector’s address 001, No. 2 projector’s address 009, No. 3 projector’s address 017, No. 4 projector’s address025, and so on.

Launch the projector. Press button **ENTER** more than 2seconds to unlock panel.

Press button **ENTER** to display DMX address;

Press button **UP** and **DOWN**, you can set the address;

Press button **ENTER** to confirm; after powered on next time, the default will be last value saved

Press button **FUNC**, it will return to the upper menu

●STAND-ALONE MODE

Operate the projector without connecting with a controller, enable the master mode through the operation panel, the projector will run in Stand-Alone mode automatically.

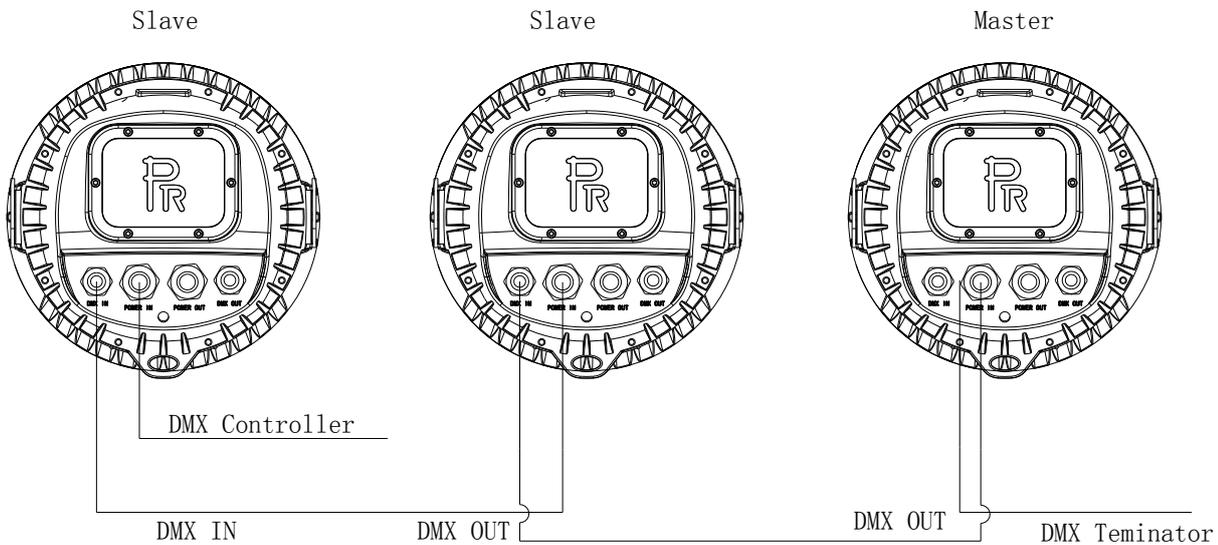
DMX address can be set at any number within 512.

●MASTER/SLAVE MODE

Many projectors can run synchronously in the Master/Slave mode by linking them with each other. First, connect the first fixture’s DMX output to the second fixture’s DMX input using XLR-XLR control cable and then connect the second fixture’s DMX output to the third fixture’s DMX input, and so on until all projector are connected in this way. Eventually connect the last fixture’s DMX output to a DMX terminator. Set 1st projector as the master and others are Slaves.

Start Addresses of all Slaves are 001; Operation mode of the Master can be set any mode for a Master’ and Slaves’ operation mode can be set accordingly

After Powered on, the group will run in Master/Slave Mode



6. OPERATION MENU

1st level menu	2nd level menu	3rd level menu	4th level menu
Address	001 - 512		DMX Address
Config Setup	MasterSlave	Slave	Default Slave
		Master	
	Language Setup	English	Default: English
		Chinese	

	Lcd Light Setup	On	Backlight will be off 3minutes after none button is pushed
		Off	
	Display Invert	Yes	
		No	
	Factory Setting	Yes	
	PRM Transmit	Yes	
	clean Progra	Yes	
	Moto offset	Color Focus	-128-127 -128-127
Moto Reset	Yes/No		
Information	LED Temperature	XX	
	Fixture use Time	XXXX	
	Software Version	X.X.X	
Test Mode	Auto Test		
	Dimmer	000 - 255	LED brightness
	Color	000 - 255	Motor position
	Wave 1	000 - 255	Motor position
	Wave2	000 - 255	Motor position
	Focus	000 - 255	Motor position
Operation Mode	DMX Mode	Yes	
	User Memory	Yes	
	User Progra Edit (ET01~ET16)	Dimmer	000 - 255
		Strobe	000 - 255
		Color	000 - 255
		Wave 1	000 - 255
		Wave 2	000 - 255
		Focus	000 - 255
		Keep Time	000 - 200 (0- 20S)

7. DMX PROTOCOL

Channel No.	Function	DMX Value	Description
1	Dimmer	000-255	
2	Dimmer Fine	000-255	Dimmer in 16 bit
3	Strobe	000-007	No
		008-255	Strobe speed from slow to fast
4	Color wheel	000-009	White

		010-019	White - Magenta
		020-029	Magenta
		030-039	Magenta – Orange
		040-049	Orange
		050-059	Orange - Yellow
		060-069	Yellow
		070-079	Yellow- Blue
		080-089	Blue
		090-099	Blue– Cyan
		100-109	Cyan
		110-119	Cyan - White
		120-127	White
		128-191	Clockwise rotation from slow to fast
		192-255	Anti-clockwise rotation from slow to fast
5	Wave Wheel1	000-001	No
		002-127	Clockwise rotation from slow to fast
		128-255	Anti-clockwise rotation from slow to fast
6	Wave Wheel2	000-001	No
		002-127	Clockwise rotation from slow to fast
		128-255	Anti-clockwise rotation from slow to fast
7	Focus	000-255	Motor position
8	Function	000-199	No
		200-209	Motor reset
		210-255	No

8. TECHNICAL DATA

ELECTRIC SPECIFICATIONS

Input voltage: 100V~240V AC, 50/60Hz

Input power: 160W @ 230V

Maximum current: AC 0.9A

Power factor: PF>90%

LIGHT SOURCE SPECIFICATIONS

Qty	1pc, TX-3636W90FC120-NUVENG-A01
Power Consumption	150W
Manufacturers Rated Lamp Life	50000hours
Color temperature:	7500K

COLORS

1pc color wheel(5colors+Open), continual rotation, magnet sensor positioning
Function
2 wave wheels , independently and bi-directionally continually rotating
1pc waterproof fan to help cooling

DIMMER

Linear Dimmer from 0-100%

STROBE

Electronic Strobe 0-25FPS. with preset strobe pulse effect

BEAM ANGLE

Beam angle: 45, motorized focus

CONTROL

International standard DMX512 signal control protocol
DMX512 3 pin and 5 pin interfaces
Master/Slave synchronized Mode
Stand alone mode, preset mode, self test mode and static scene mode
3 operation modes(DMX mode, user memory, preset memory)

OTHER FUNCTIONS

LCD screen
DMX 512 port for firmware upgrade, a convenient and quick way for firmware upgrade via DMX cable
Over temperature protection
Fixture time, DMX512 channel value and software version will be displayed
Display can be inverted

HOUSING

High tensile cast Aluminum alloy , IP65

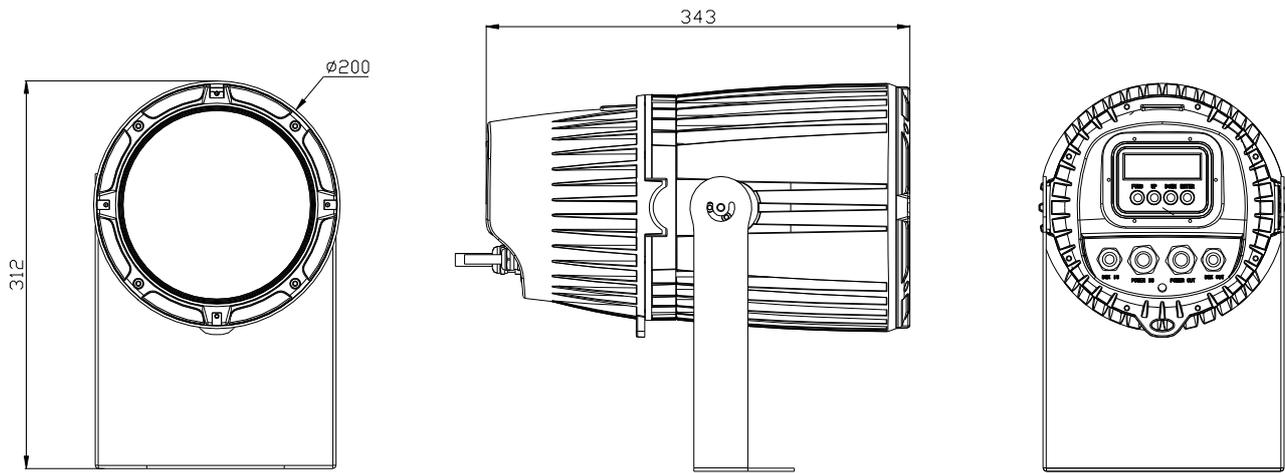
NET WEIGHT

9.5Kg

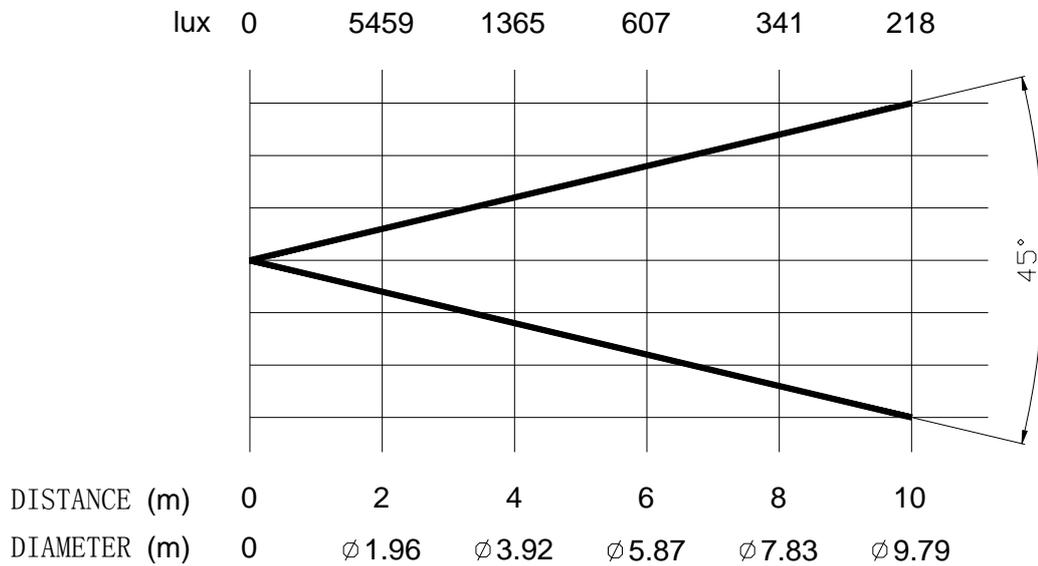
OPERATION TEMPERATURE:

Maximum ambient temperature 45 °C

SIZES:

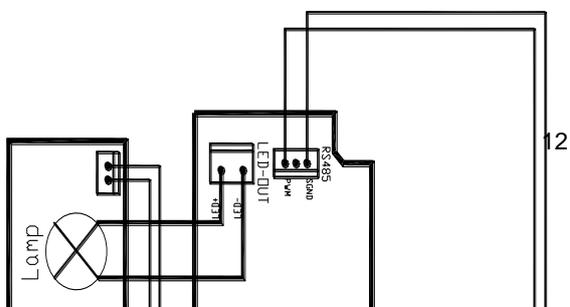


LIGHT OUTPUT:



9. CIRCUIT DIAGRAM AND PCB CONNECTIONS

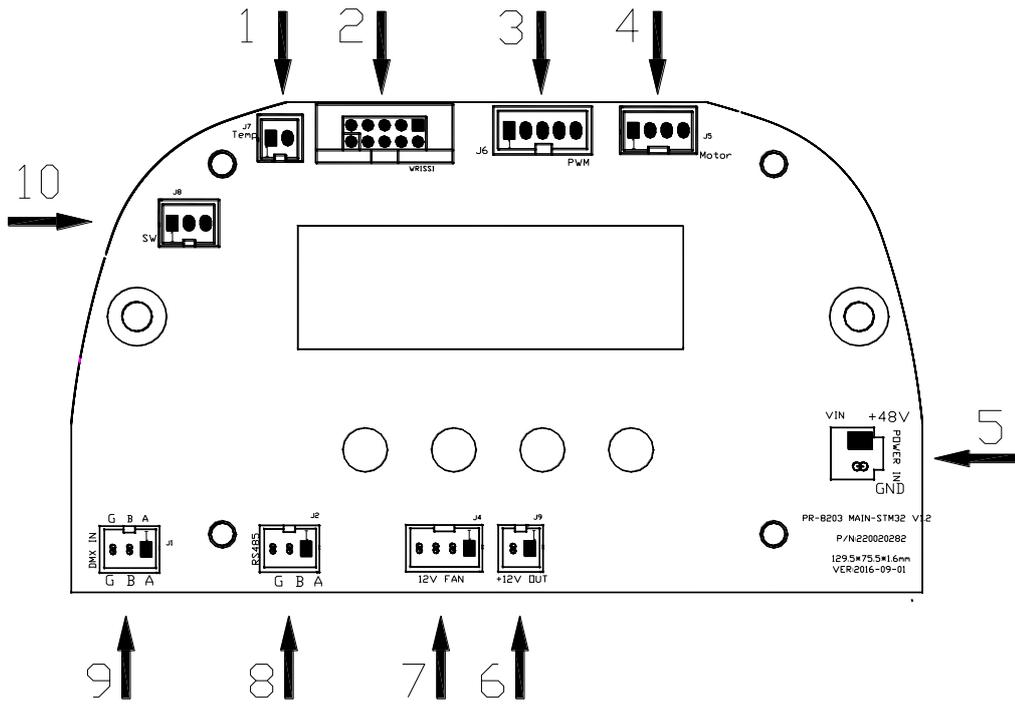
●CIRCUIT DIAGRAM



●PCB CONNECTIONS

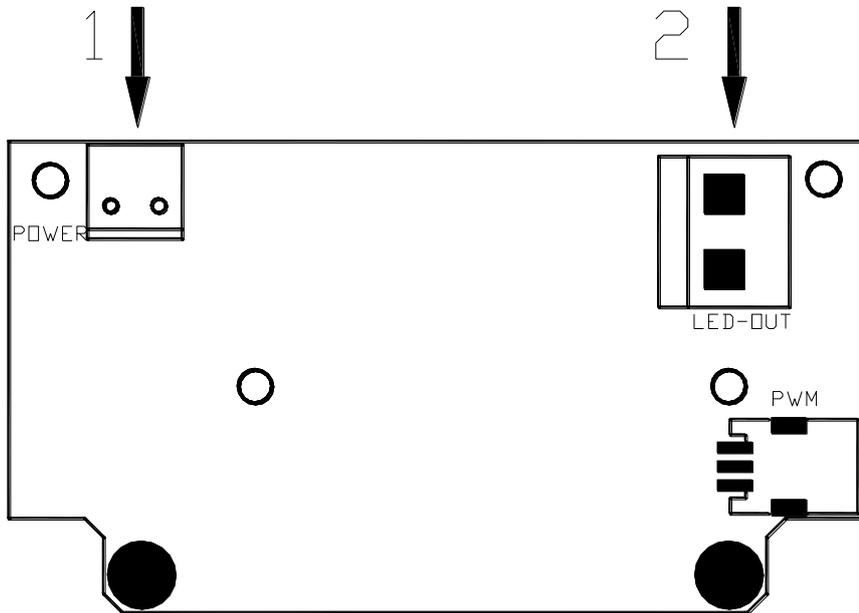
No	Name
1	Thermal Sensor
2	Reserved

Master Board



3	PWM signal interface
4	Reserved
5	Power
6	Fan
7	Reserved
8	485 signal interface
9	DMX signal interface
10	Reserved

Diver board



No	Name
1	Power
2	LED Driver

10. COMPONENT ORDER CODES

No.	Name	Code No.	Qty	Remarks
1	POWER SWITCH	6230000129	1	
2	LED ENGINE DRIVER BOARD	230061442	1	
3	DOUBLE CONVEX LENS OF PR-6810	6070000002	1	
4	STEPPING MOTOR	6030040000	3	24BYJ48-51
5	STEPPING MOTOR	6030000002	1	DC24V 0.11A
6	WATERPROOF FAN OF PR-6810	6030040235A	1	
7	LED LIGHT SOURCES OF PR-6810	6150000004	1	TX-3636W150FC120-NUVENG-A01

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PR lighting will try its best to offer accurate and overall information about a product's technical data. Any changes won't be notified if necessary. Patented Products.
Counterfeiting Will be Prosecuted!

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