





PRODUCT SPECIFICATION

Products Name	UV LED Curing Oven
Products Model	UVOV81T-200200
Product Configuration	1 controller, 1 light source irradiation head
<p>Thank you for asking about FUTANSI UV LED light source. Please read the specification carefully so that you can understand our products correctly and keep it properly after reading for reference at any time.</p> <p>FUTANSI products have passed ISO9001 and CE certification.</p> <div style="text-align: right;">   </div>	



R&D DEPARTMENT		
APPROVED	CHECKED	PREPARED
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Number	FTS-UVLED-OS-202301
Edition	2023V1.0
Date	January 01, 2023

Shanghai R&D Center (Main factory: QingPu, Shanghai)

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Safety Warnings		PLEASE OBSERVE THE FOLLOWING ITEMS WHEN USING THE PRODUCT!	
 notice	 warning		
<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  forbid </div> <div> <p>No liquid, combustible, metal or other foreign matter can enter the product. Otherwise, this product will have abnormal fever and smoke. Construction (wiring, disassembly, etc.) shall not be carried out under the state of power supply being switched on. It could lead to an electric shock. Do not place items on this product which may cause ventilation blockage. Otherwise, it will be burnt due to heating. Do not touch with bare hands during or after irradiation. Otherwise, burns may be caused by the high temperature.</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;">  Be sure to comply </div> <div> <p>Please use within the guaranteed features and performance range of this product. Exceeding the guaranteed performance limits will result in damage. Do not touch the terminal when powered on. It could lead to an electric shock. Please connect the wires, connectors, etc. Otherwise, it may lead to abnormal fever and smoke of the product. Do not use input power outside the specification scope. Otherwise, it may result in burning. Please ground the earth properly. Otherwise it may cause electric shock or misoperation. Do not use in places where the temperature changes violently and condensation occurs. Otherwise it will cause a failure. Do not use in places with violent vibration or impact. Otherwise it will cause a failure.</p> </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  forbid </div> <div> <p>Do not use this product in the environment of combustible gas. Otherwise, it may cause an explosion. Do not put this product in the fire. Otherwise, it will lead to the rupture of electronic components and so on. When the LED is on, do not look directly at direct light or reflected light, or cause it to shine on the skin. Otherwise it may cause eye or skin damage or inflammation.</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;">  Be sure to comply </div> <div> <p>When installing the body, please avoid exposing the human body to LED-UV light. Exposure to LED-UV light may cause skin damage or inflammation. If exposure to LED-UV light and UV reflected light is possible, cover with a case that blocks UV light with appropriate transmittance and thermal properties. Be sure to wear goggles and protective equipment during installation and operation. Otherwise it may cause eye or skin damage or inflammation. The radiation produced by the host machine contains UV light with a wavelength of 365nm or 385nm. So be sure to use UV light protection goggles. Be sure to clean the LED irradiation head when the power is cut off. Cleaning while powered may cause eye or skin damage or inflammation. It could also cause an electric shock.</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;">  Ban decomposition </div> <div> <p>Do not disassemble, modify. Failure to do so may result in an accident, injury or electric shock. Otherwise, this product will have abnormal fever and smoke. Exposure to LED-UV light may cause eye or skin damage or inflammation.</p> </div> </div>		

Matters need attention:

1. General precautions

- In the attached connection cable, the LED irradiation head connection cable can be used to be bent. Under the standard test conditions, the bending performance of the cable is satisfied. However, its performance under any conditions of actual use cannot be guaranteed.
- Do not disassemble, modify or set up inside. Broken down, modified use caused by failure, damage, etc., will not be covered by the warranty.

2. Installation environment

- Installation and use of ambient temperature and humidity 5°C -+ 35°C, ≤85%RH (no condensation, freezing).
- Storage environment Temperature and humidity: -10 ° C to +40 ° C, ≤85%RH (Do not condense or freeze).
- Dust, oil smoke, conductive dust, corrosive, flammable gas, salt, iron, etc.

- Free of water, oil, drugs, etc.
- No dramatic temperature changes and vibration, impact sites without direct sunlight, no strong magnetic field, strong electric field sites.

3. About power supply and wiring

- Supply single-phase 220V to 240V(frequency 50Hz to 60Hz) power supply voltage and grounding.
- Do not use the same power cord with the motor and the induction mechanical and high power device.
- For the wiring between the controller and the LED irradiation head, please use the attached cable and connect.
- In the attached connection cable, the LED irradiation head connection cable can be used to be bent.
- When used in bending, as a minimum bending radius greater than 110mm, please perform the system design. Bending with radius less than recommended, there is a possibility of rupture occurring in a very short time period.

4. Installation precautions

- Do not install the air-cooled radiator in a confined space. Do not block the vent of the radiator.

5. Note when power on

- Before switching on the power supply, make sure all connections are correct.

Directory



一、 Product Introduction..... Page 3

(Main wavelength centered at 365 nm, 375 nm, 385 nm, 395 nm, 405 nm, can be used for UV glue, UV ink, UV light oil, UV paint, UV paint, thin films, such as UV light curing materials , other wavelength can also be customized.)

二、 Basic Parameters..... Page 4

(Optional configuration and specifications of controller + irradiation head + water cooler + power cord + connecting cable.)

三、 Controller dimension drawing and installation Page 5

(When installing and using the air-cooled irradiation head, please ensure that there is enough space to avoid the hot air from the fan.)

四、 External dimension and installation space Page 6

(Please refer to the text for the picture of the size of the multi-specification irradiation head.)

五、 External I/O connection, 232 or 485..... Page 7

(See Proper connection.)

六、 Specification parameters of water cooler..... Page 8

(See text.)

七、 For the record..... Page 9

(Please do not disassemble or modify the UV controller or UV irradiation body.)

Product introduction

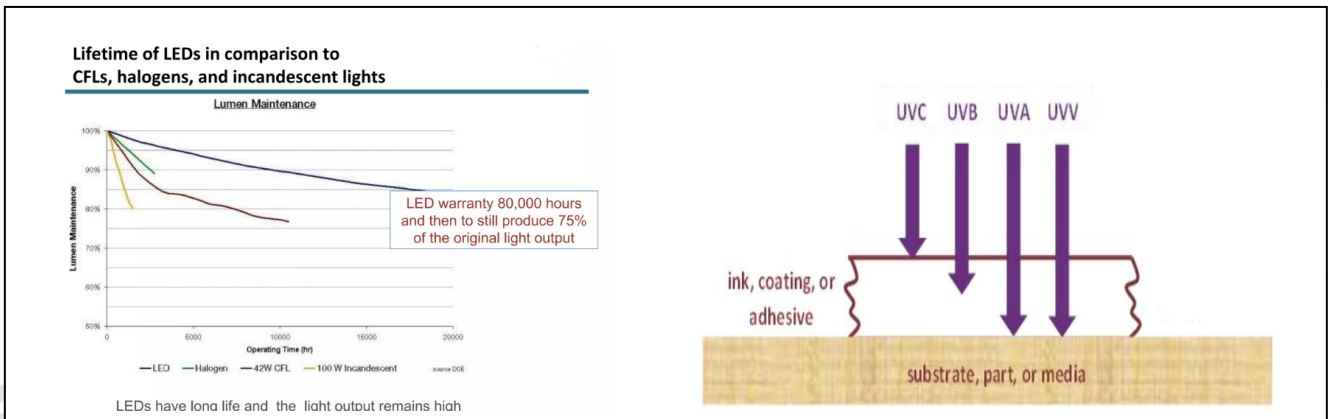
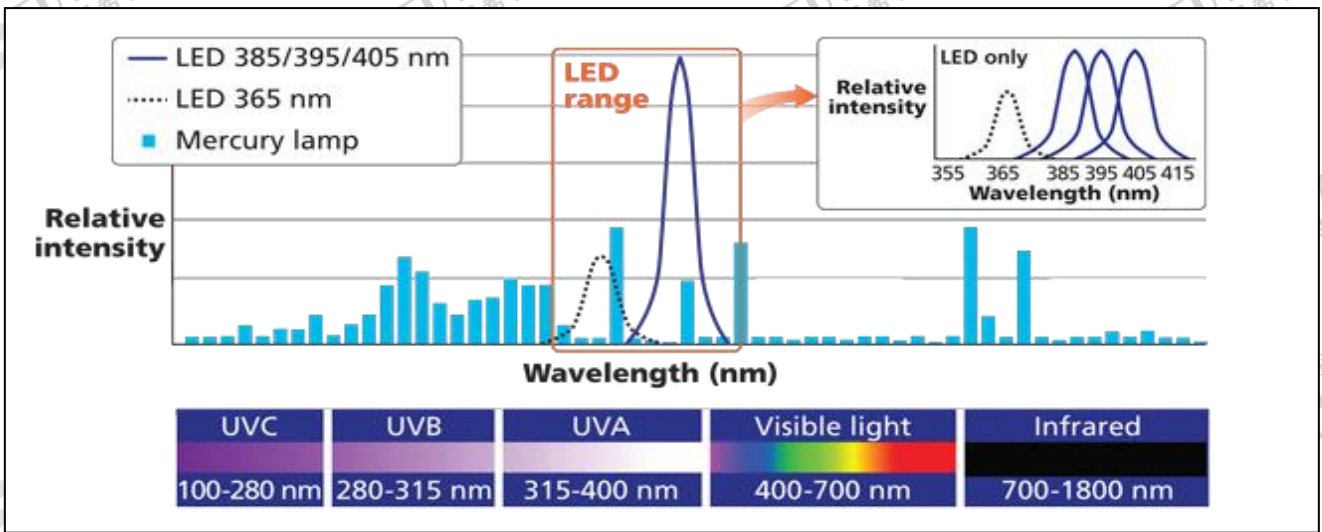
The UV LED light source series products developed by FUTANSI Electronic Technology use UV curable technology to cure ink, coatings, adhesives and other UV photosensitive materials through polymerization method, which is a new generation of light source with low power consumption, environmental protection and safer.

UV LED is a new green and environmental protection high-tech products, with the increasingly mature and widely used LED technology, it will soon replace the traditional electrode type UV mercury lamp. Compared with conventional UV mercury lamps, do not contain mercury and do not produce ozone; Based on its own physical characteristics, it overcomes many disadvantages and limitations of traditional UV mercury lamp, and can reach peak intensity instantaneously without preheating and waiting during startup. Ultra-low energy consumption and long service life, it is the best choice to replace the traditional UV mercury lamp.

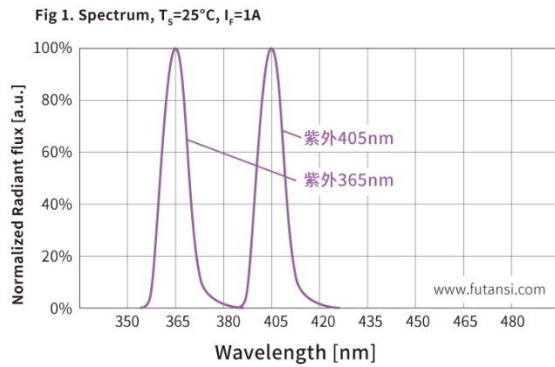


三、Basic parameters and diagrams

NO.	Parts	Items	Technique Data
1	Controller UVSF81T	Voltage	220V
2		MODEL SIZE	412X264X142 (mm)
3		Cooling mode	Air-Cooled
4		Control Method	On-screen touch/pedal /RS232/485 communication
5		Adjustable range of irradiation power	10%-100% adjustable
6		irradiation swelling model	Manual: Steady on after startup
7			Automatic: Set irradiation countdown time (0.1-999.9s)
8			Step: Achieve step irradiation (1-20 steps)
9			Loop ladder: single/infinite
10		traffic control	RS232 serial port, 485: data read and write, LED switch and parameter control
11			I/O interface LED switch control and running state output
12	Irradiation head SFHD-200200	heat-dissipating method	air cooling
13		wavelength coverage	365±5nm
14		External structural dimension	230*230*100mm
15		Light point size	200x200mm
16		Suggested range	15-20 (mm)
17		exposure intensity (MAX)	1000 mw/c m ² (FTIU500 Illuminometer measurement data)
18		Uniformity of irradiation intensity	10%, homogeneity = $(\text{Max}-\text{Min}) / (\text{Max} + \text{Min}) \times 100\%$
19	working life	20000 hour (Constant temperature 20±1°C, constant humidity 50±3%, attenuation about 25%)	
20	Curing Oven	Overall dimensions	450X450X370 mm
21		Product placement size	360X310 mm (Width x DEEP)
22	power cord	cable	2m
23	connecting line	cable	2m
24	electric power	Total electrical power of each component	1300w
25	Optional functions	on-line monitoring	None
26	Optional functions	Radiosity	None

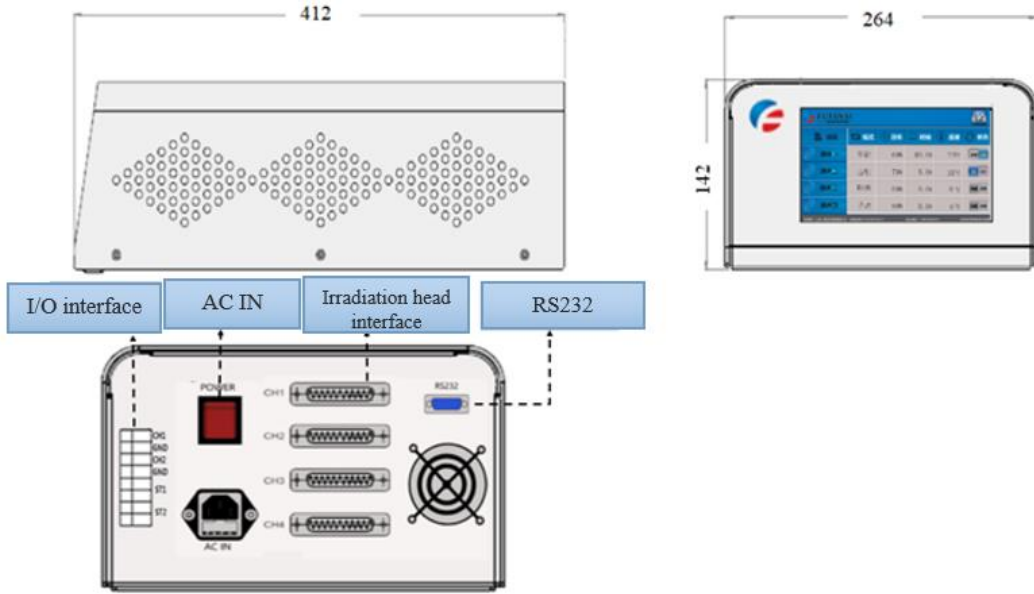


Spectral distribution diagram:

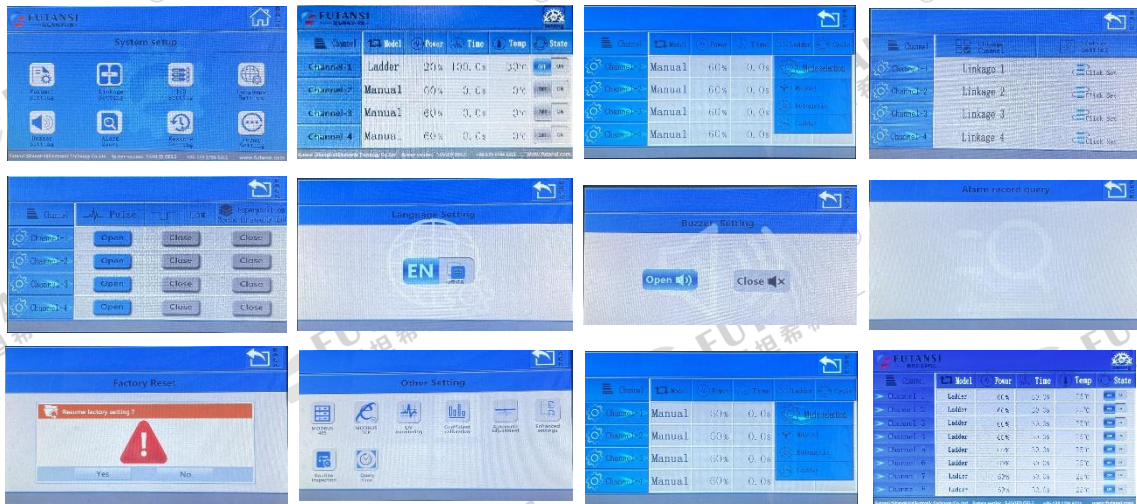


三、Controller dimension diagram system:

Controller outline size drawing:



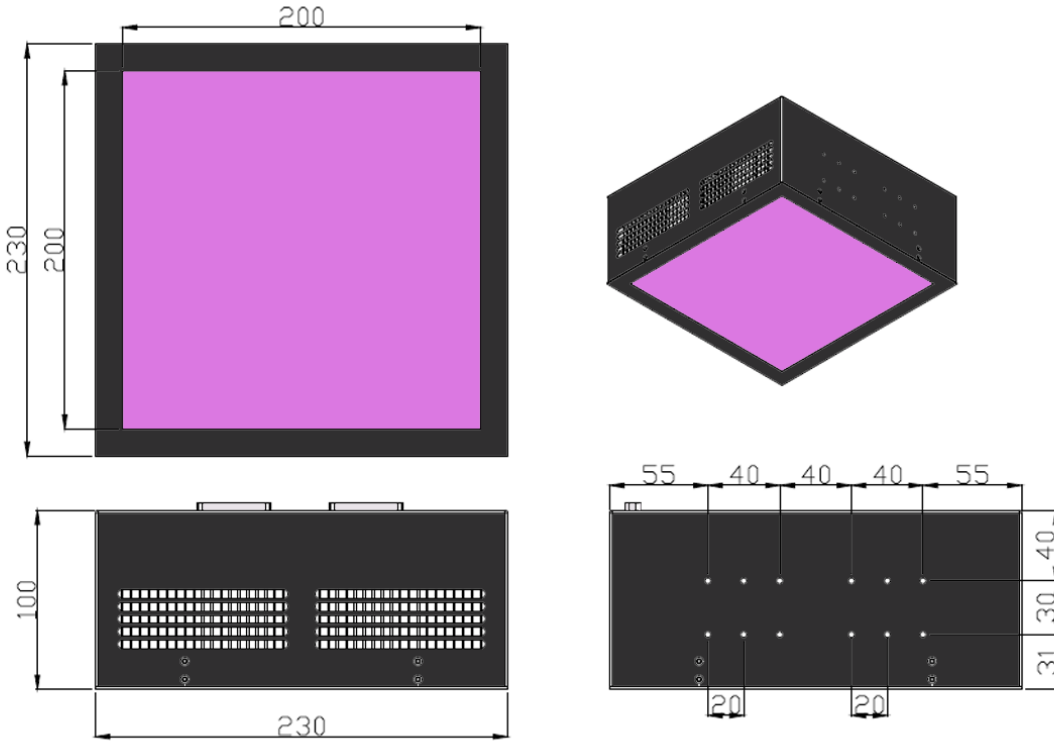
System control interface(The controller is built into the pipeline):



四、Outline size diagram of irradiation head and connection diagram of system structure:

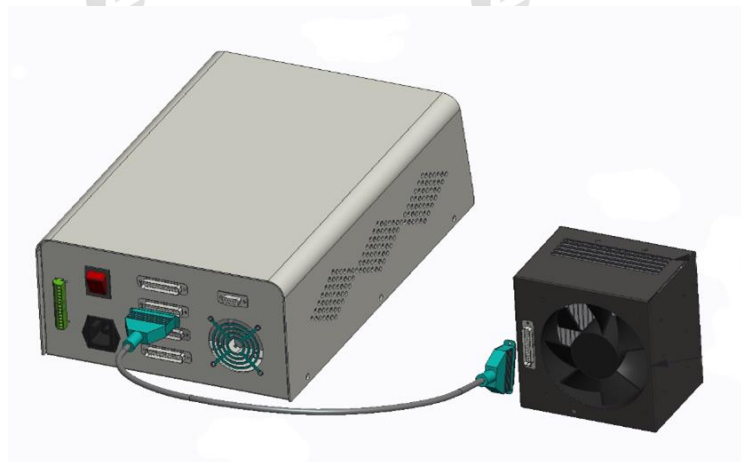
- Do not install the air cooled irradiation head in a confined space.

Overall dimensions and installation space:



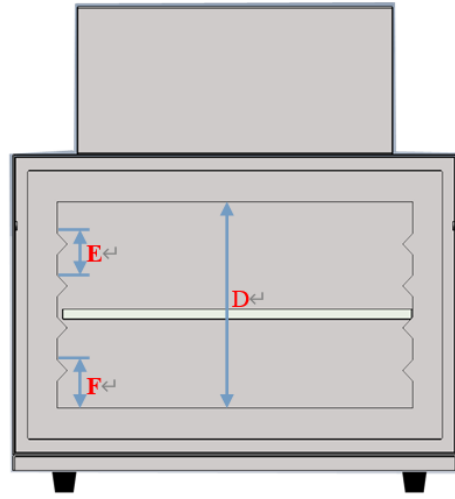
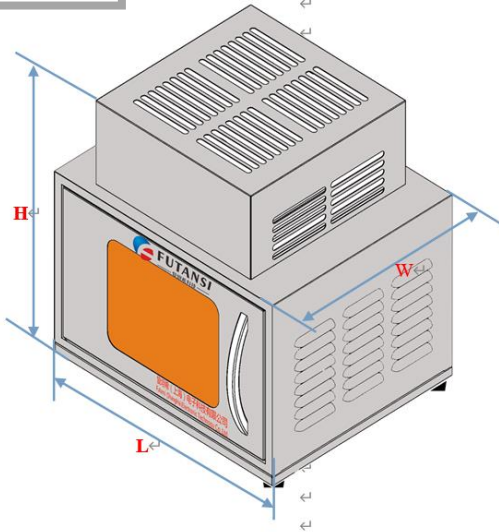
System structure connection diagram:

- Ensure that the power cable and connecting cable of the irradiation head are securely fixed before installation and use.



Oven outline size drawing:

L=450mm
W=370mm
H=440mm
D=196mm
E=40mm
F=45mm



五、UV External I/O connections

Warning: Please load and unload the junction box connectors with the theme power off.

NO.	Name	Signal content	NO.	Name	Signal content
1	CH1	Channel One switch control	15	OUT1	Channel one output
2	CH2	Channel two switch control	16		
3	GND	Input common place	17	OUT2	Channel two output
4	CH3	Channel three switch control	18		
5	CH4	Channel four switch control	19	OUT3	Channel three output end
6	GND	Input common place	20		
7	RXD	RS485-A	21	OUT4	Channel four output end
8	TXD	RS485-B	22		
9	GND	485GND Dedicated (optional)	23	READY	ready signal
10	COOL	Water cooling signal input	24		
11	ESD	Security Devices	25	ALARM	alarm signal
12	GND	Common	26		
13	NC1	NULL	27	V+	DC:12-24V+
14	NC2	NULL	28	V-	DC:12-24V-

1、Through RS232 or RS-485 to achieve data transmission, exchange, control, and Settings.

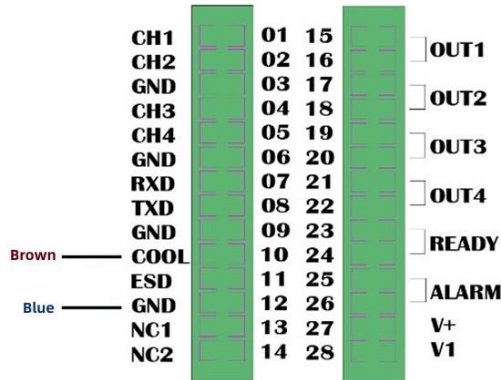
2、MES signal port can realize data transmission and exchange between devices through the network, upload data to the terminal to read, control, and set parameters. (RS232 and MES signal port choice)

3、Power cable port input 100 to 240VAC.

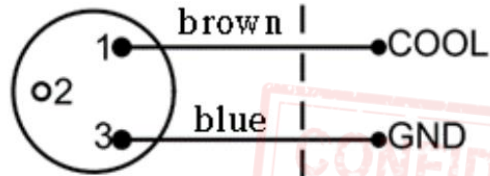
Special reminder: The input signal is strictly prohibited to live, only support switching signal input, signal line is not positive or negative. If the customer input control signal is charged, it is necessary to add relay isolation to control it. The equipment failure caused by the customer's use of dotted signal is not within the scope of our warranty.



Water cooler wiring diagram:

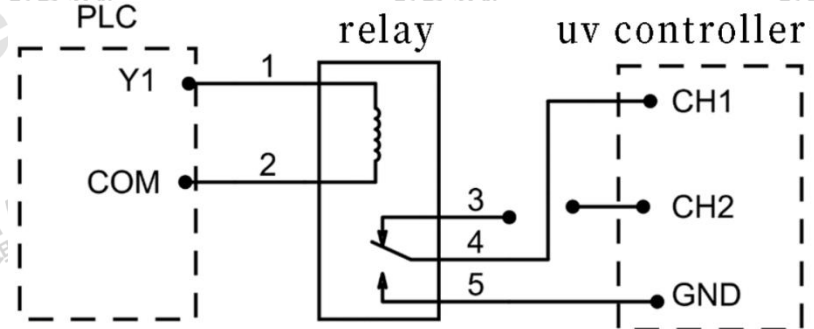
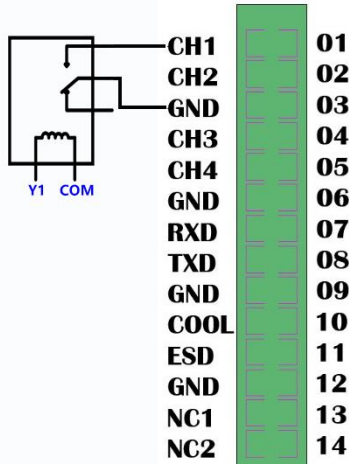


Signal cable for water cooler

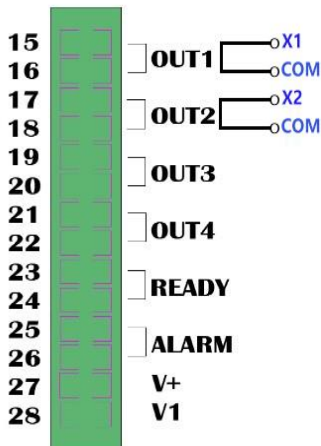


uv controller

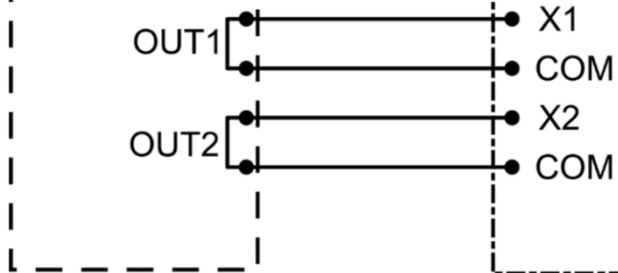
PLC output wiring diagram:



PLC input wiring diagram:

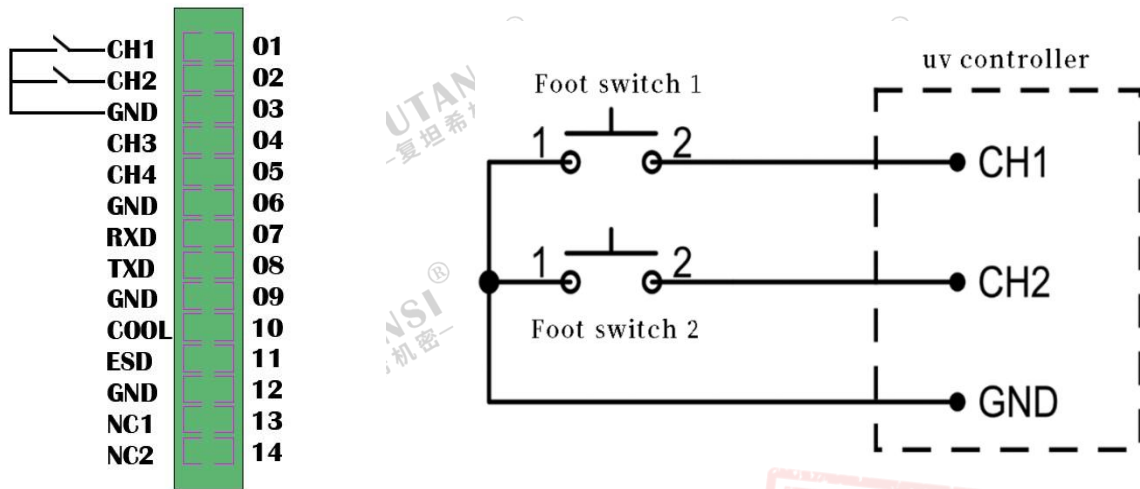


uv controller



PLC

Foot switch wiring diagram:



六、For the record:

- If you disassemble or modify the UV controller or UV irradiation body, it may cause the product cannot be used normally. If you disassemble and reassemble the product, it may cause personal injury or damage to the object. In this case, our company shall not assume any legal liability for the direct or indirect losses.
- The electric shock that may occur when you insert or remove the power connector with wet hands. The device is not equipped with FUTANSI or other brand safety goggles.
- Burns caused by intentional or inadvertent touching of the surface of the equipment immediately after use ;
- Personal injury or object damage caused by use of the device near a water source or in a humid place ;
- Electric shocks or other accidents caused by the use of the equipment during thunderstorms, accidents caused by the use of the equipment near gas or natural gas ;
- Do not strictly follow the instructions, and continue to use the device regardless of error messages or faults ;
- Untrained personnel use equipment and continue to use defective equipment ;

 我们的客户 (Our Customers)



 我们的专利 (Our Patent)





GREAT PASSION FOR UV CURING AND MOTION CONTROL

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