


PRODUCT SPECIFICATION

Products Name	UV LED Curing Oven
Products Model	UVOV81T-1
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 style="text-align: center;">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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Edition	2023V1.0
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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="width: 45%;"> <p style="font-size: 2em; color: red; text-align: center;">⊘</p> <p style="text-align: center;">forbid</p> <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 style="width: 45%;"> <p style="font-size: 2em; color: blue; text-align: center;">⚠</p> <p style="text-align: center;">Be sure to comply</p> <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="width: 45%;"> <p style="font-size: 2em; color: red; text-align: center;">⊘</p> <p style="text-align: center;">forbid</p> <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 style="width: 45%;"> <p style="font-size: 2em; color: blue; text-align: center;">⚠</p> <p style="text-align: center;">Be sure to comply</p> <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="width: 45%;"> <p style="font-size: 2em; color: red; text-align: center;">⊘</p> <p style="text-align: center;">Ban decomposition</p> <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.

一、 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.

二、 Basic parameters and diagrams

Parts	Items	Technique Data	
Controller UVSF81T	Voltage	220V	
	Cooling mode	Air-Cooled	
	Control Method	On-screen touch/pedal /RS232/485 communication	
	Adjustable range of irradiation power	10%-100% adjustable	
	irradiation swelling model	Manual: Steady on after startup	
		Automatic: Set irradiation countdown time (0.1-999.9s)	
		Step: Achieve step irradiation (1-20 steps)	
Loop ladder: single/infinite			
traffic control	RS232 serial port, 485: data read and write, LED switch and parameter control		
	I/O interface LED switch control and running state output		
Irradiation head SFHD-200200	heat-dissipating method	air cooling	
	wavelength coverage	365/385/395/405±5nm, or customized	
	Light exposure size	200x200mm or customized	
	Suggested range	15-20 (mm)	
	Max exposure intensity	1000 mw/c m ² or customized	
	Product placement size	296X325.5 mm (Width x DEEP)	
power cord	cable	2m	
connecting line	cable	2m	
electric power	Total electrical power of each component	600w	
Optional functions	on-line monitoring	None	
Optional functions	Radiosity	None	

三、 Controller dimension diagram system:

Oven outline size drawing:



Water Chiller model & drawing:

CY-5300




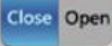

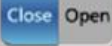

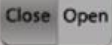

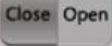


Vacuum pump drawing:

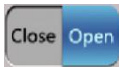


Model	2xZ-2
speed of evacuation	2
ultimate pressure(Pa)	$6 \cdot 10^{-2}$
ultimate pressure(Torr)	$5 \cdot 10^{-4}$
rotate speed(R/M)	1400
Working voltage	220V
motor power	0.37W
Dia. of inlet(mm)	25
oil capacity(L)	0.48
temperature rise($^{\circ}$ C)	<40
Overall Dimensions(mm)	450*148*280
Weight (KG)	20
Noise(db)	67

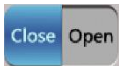
System control interface:

 		Channel	Model	Power	Time	Temp	State
	Channel-1	Manual	60%	0.0s	28 °C		
	Channel-2	Manual	60%	0.0s	28 °C		
	Channel-3	Manual	60%	0.0s	0 °C		
	Channel-4	Manual	60%	0.0s	0 °C		
Real-time detection of ultraviolet light energy 0.0mw/cm ² 0.0mw/cm ² Futansi (ShangHai)Electronic Technology Co.,Ltd www.futansi.com							

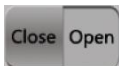
notes:



The temperature can be detected normally, which indicating that the LED light source is connected properly and can be used normally.



It indicates that the LED light source is running.



It means that no LED light source is detected. In this state, the OFF/ON is invalid, and the click is not reflected.



It indicates the temperature abnormality alarm, click to cancel the alarm. When this warning icon appears during operation, it indicates that the UV light source temperature is too high. Please check if the heat sink is working properly.



It indicates that the LED is abnormal. Click to cancel the alarm. When this alert icon appears during operation, it indicates that the LED is shorted or open. Please check if the LED light source is lit normally. If you cannot solve the problem, please contact the company in time.

*If some kinds of device encountered the problem on this page, it means that the water cooler is not connected or there is something wrong with the water cooler . Please check the external water cooling equipment. If the water cooling should connected to the water cooling machine, the water cooling machine must be turned on first, otherwise an alarm will be given.

System settings

System settings main interface



Parameter setting

Parameter setting main interface

Channel	Model	Power	Time	Ladder	Cycle
Channel-1	Manual	60 %	0.0 S		
Channel-2	Automatic	60 %	10.0 S		
Channel-3	Ladder	100 %	10.0 S	4	1
Channel-4	Ladder	100 %	10.0 S	4	1

Note: Red area and font indicate clickable settings area

Each channel can independently set (three) different irradiation modes: manual, automatic and step.

Parameter setting process

Each channel can be independently set (three) different irradiation modes: manual, automatic, ladder.

Manual irradiation mode: The irradiation power can be set, but the time cannot be set (0-999.9 seconds automatic cycle).

Automatic irradiation mode: The irradiation power and irradiation countdown can be set.

Step irradiation mode: You can set irradiation power, irradiation countdown and step number (up to 20 steps).

Step cycle mode: In step mode, up to 99 cycles can be set. The default loop is 1 time.

Adjustable range of irradiation power: 10%--100%

Auto mode time can be set in the range: 0.0s--999.9s

Step range of step irradiation: 0-20 steps

Step irradiation cycle range: 1-99 times

Ladder: The number of steps and number of loops only appear in Ladder mode

Mode setting

Example1: Mode setting. Click the channel corresponding mode area, the mode selection box will pop up, select the desired mode, and the mode corresponding column will automatically display the selected mode.

Power Setting、Time Setting

Example2: Click on the corresponding power area of the channel, the power value setting keypad will pop up, set the power, time and click to confirm.

The screenshot shows a control interface with a table of channel settings and a mode selection pop-up menu. The table has columns for Channel, Model, Power, Time, Ladder, and Cycle. The mode selection pop-up menu is open for Channel-1, showing options for Manual, Automatic, and Ladder. The Manual option is selected with a checkmark.

Channel	Model	Power	Time	Ladder	Cycle
Channel-1	Manual	60 %	0.0 S		
Channel-2	Automatic	60 %	10.0 S		
Channel-3	Ladder	100 %	10.0 S		
Channel-4	Ladder	100 %	10.0 S	4	1

Mode selection pop-up menu:

- Manual (checked)
- Automatic
- Ladder



Ladder setting

Example3: Ladder setting. The third channel is the ladder mode. Clicking on the corresponding power and time zone of the third channel will pop up the example 4 interface.



Example4: Power and time can be set, the number of steps in the green box is the number of steps in the example 3 interface, the number of steps corresponds to the blue background, and the others are gray. After the setting is completed, click the Back button to return to the parameter setting main interface.

Ladder setting (1-10 Ladder)							Down (11-20 Ladder)
Ladder	Power	Time	Ladder	Power	Time		
Step1	100%	10.0S	Step6	60%	10.0S		
Step2	60%	10.0S	Step7	60%	10.0S		
Step3	60%	10.0S	Step8	60%	10.0S		
Step4	60%	10.0S	Step9	60%	10.0S		
Step5	60%	10.0S	Step10	60%	10.0S		

Pedal Setting

Channel	pulse	low	Stacking patterns
Channel-1	Open	close	close
Channel-2	Open	close	close
Channel-3	Open	close	close
Channel-4	Open	close	close

The foot start mode is divided into pulse and low level mode. The default open state is: pulse

Pulse: Press the foot switch to start the irradiation, and stop the irradiation when you press it again.

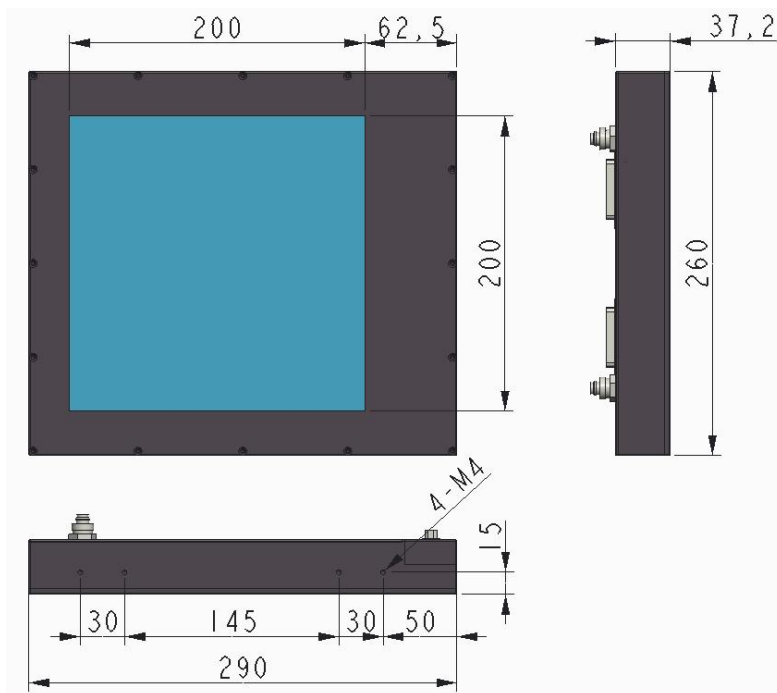
Low level: Depress the foot switch to start irradiation, and stop irradiation when released.

Overlay mode: not used by default, only used in special pipelines.

4、 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:



5、 **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-

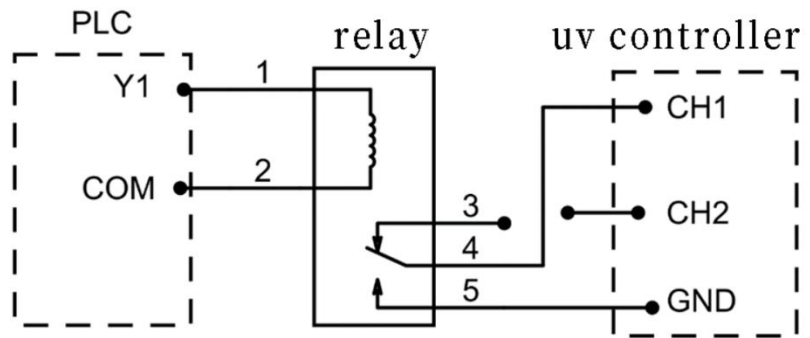
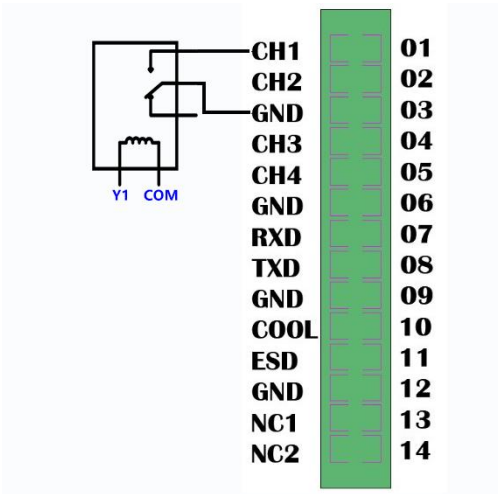
1、 Through RS232 or RS-485 to achieve data transmission, exchange, control, and Settings.

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)

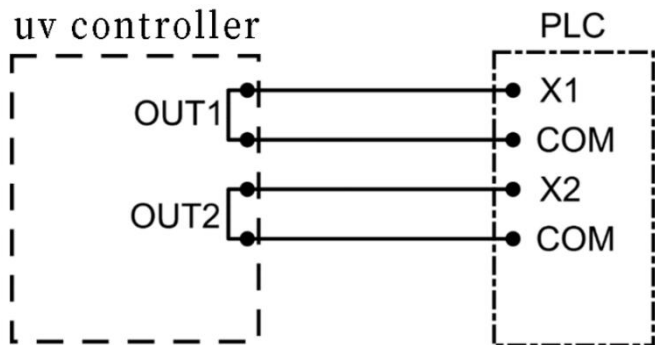
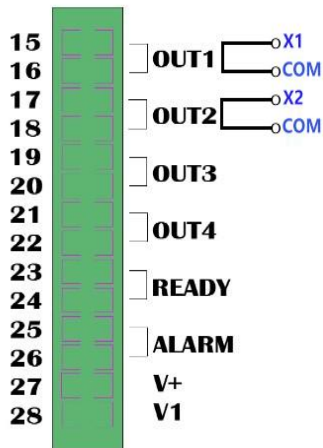
3、 Power cable port input 100 to 240VAC.

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.

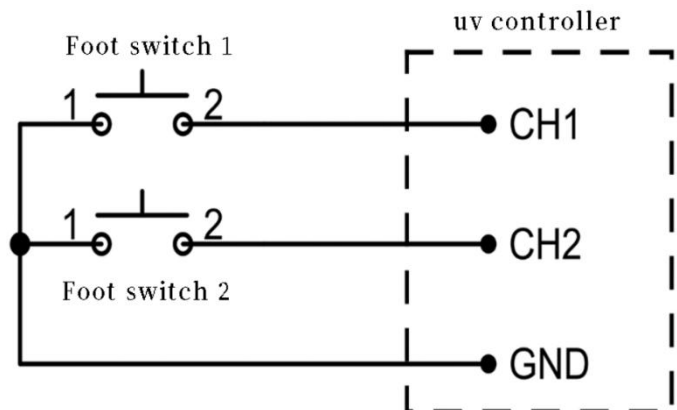
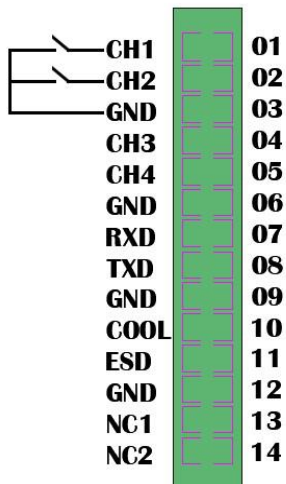
PLC output wiring diagram:



PLC input wiring diagram:



Foot switch wiring diagram:





6、 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;

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 FUTANSI®
— 聚雄电子科技 —

 我们的专利(Our Patent)

 FUTANSI®
— 聚雄电子科技 —



GREAT PASSION FOR UV CURING AND MOTION CONTROL



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