

R-CURE

UV CURING LAMP



R-CURE

**Efficient UV Curing
for printing processes**



Distributed by:
Pro Pack Solutions
2421B Lance Ct.
Loganville, GA 30052

sales01@propacksolutions.com
(770) 554-1187
www.propacksolutions.com

CONTENTS

SAFETY INFORMATION	4
EMERGENCY CASE	6
ENVIRONMENTAL PROTECTION	6
PRODUCT WARRANTY	6
ABOUT THE R-CURE	7
INSTALLATION	9
OPERATION	14
COMMON ERRORS	17

SAFETY INFORMATION

For safe and proper usage, please carefully review and follow the precautions outlined below. These precautions come in two forms: 'warnings' and 'cautions,' and they are all crucial for your safety and must be strictly observed.

A warning signifies a high risk of accidents, including death, severe injury, fire, or property damage due to neglecting the warning's content.

- Do not disassemble the device or attempt to replace parts yourself because serious accidents may occur.
- Do not move or shake the device violently when it is running.
- Avoid handling the power switch or plug with wet hands, as doing so may pose a risk of electric shock.
- Ensure the device is grounded properly and securely.

Disregarding these precautions can compromise your device's performance.

- The safety warnings included in this manual are crucial. Please follow them carefully.
- For proper installation, begin by reading the 'Installation Instructions' provided in this manual.
- Exercise caution when the device's irradiation LED light is active, and avoid directing it toward the human body, particularly the skin, to prevent potential skin damage.
- To protect your eyes, avoid direct eye contact with the irradiation LED light source and the illuminated irradiation area. Wear UV-protective glasses to safeguard your eyes during any viewing or prolonged exposure.
- The device should operate in a space that is well-ventilated and free from moisture.
- During and after operation, be cautious, as the LED irradiation head can become hot. Avoid touching to prevent burns.
- To prevent device damage or harm to the operator, ensure the device's operational settings are accurate. Please adhere to the methods specified in the manual, and refrain from any unauthorized practices.
- When performing device cleaning, always switch off the power and disconnect the device from its power source.
- Make certain the device is used with the correct power supply to avoid potential damage or fire hazards.
- Thank you for carefully reading and complying with these safety precautions. You are an invaluable part in guaranteeing the safe and accurate utilization of this device.



BEFORE INSTALLATION AND USE, PLEASE ENSURE THE FOLLOWING

- It is crucial to have a good understanding of electronics before proceeding with installation and usage.
- For successful installation and product usage, we urge you to read and fully understand the manual.
- The company reserves the exclusive right to interpret this document, and any unauthorized alterations or sharing is prohibited.

Operating Instructions

- Do not place objects on the equipment while the equipment is in use.
- Maintain ideal operating temperatures by preventing dust and foreign materials from blocking the airflow in and around the LED irradiation head and the power supply unit.
- Any potential blockages within the airflow system may compromise the performance of the LED UV light source, and lead to reduced brightness and a shorter service life. Moreover, these obstructions can hinder the cooling system's heat dissipation, causing decreased illumination and a reduced light source lifespan.
- For optimal airflow in the light source, please clean the inlets and outlets of the UV light source daily. Please tailor the cleaning frequency to match your environment and specific operating conditions.
- To maintain consistent light intensity and evenness, periodically wipe the irradiation head's glass lens using a clean, lint-free cloth, and adjusting the frequency based on the level of dirt accumulation resulting from use.
- Avoid excessive bending of the wire. To prevent wire failure, ensure that the maximum bending radius of the connecting wire between the LED irradiation head and the power supply does not exceed 7 times the wire's diameter.

EMERGENCY CASE



FOR EMERGENCY SITUATIONS, E.G. SMOKE COMING OUT OF R-CURE, FIRE, EXPLOSIVE SOUNDS, ETC.

PLEASE REMOVE THE POWER SUPPLY IMMEDIATELY!

ENVIRONMENTAL PROTECTION



DON'T THROW R-CURE INTO REGULAR GARBAGE OR RECYCLING BINS. ENSURE PROPER DISPOSAL (E.G. ELECTRONIC WASTE) IN ACCORDANCE WITH YOUR LOCAL LAWS.

PRODUCT WARRANTY

- Device damage during normal use qualifies for warranty.
- Failure during normal use includes damage resulting from uncontrollable factors. Warranty is void for improper operation or unauthorized disassembly and maintenance.
- The LED UV light source equipment includes a free 24-month warranty starting from the date of purchase. After the warranty period, maintenance services, including transportation costs, will incur charges.

The warranty is VOID if:

- Damage caused by disregarding product usage conditions.
- Damage arising from unauthorized alterations, modifications, or self-initiated maintenance.
- Damage is caused by operating the device in conditions that exceed the prescribed limits, such as high-temperatures or corrosive environments.
- Damage results from abnormal external forces, including falls, crushing, impacts, or excessive physical stressors.
- Damage is from natural disasters or unforeseeable circumstances, including but not limited to fires, floods, earthquakes, and similar occurrences.
- Damage caused by counterfeit products or those without valid purchase receipts.

ABOUT THE R-CURE

Thank you for purchasing the **R-CURE UV CURING LAMP**, a product of **MSSC, LLC**. This product is designed for printing applications with UV ink using Thermal Inkjet Technology (TIJ).

The **R-CURE** system rapidly cures UV ink directly on various material surfaces, making it an ideal solution for a wide range of printing applications such as decals, aluminum, PE, and PP printing.

SPECIFICATIONS – POWER SUPPLY

No	Description	Specifications
1	Model	LRS-200-24
2	Power supply	DC 24V – 8.8A
3	Rated power consumption	211.2W
4	Dimensions	215 x 115 x 30mm (L x W x H)
5	Temperature conditions	<ul style="list-style-type: none"> Operating temperature: 34 - 131°F (1 - 55°C) Storage temperature: 14 - 149°F (-10 - 65°C) Relative humidity: 30% ~ 80%, non-condensing

SPECIFICATIONS – UV LAMP

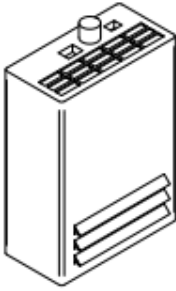
No	Description	Specifications
1	Model	R-CURE UV LAMP
2	LED lamp head	90 x 50.5 x 142.5mm
3	Weight of the driving power supply	300g
4	LED head weight	approximately 680g
5	No-load power consumption	approximately 10W including power supply and cooling fan
6	On-load power consumption	approximately 190W per irradiated head
7	Spot size	70 x 20mm
8	Recommended exposure height	3 - 10mm (<i>5mm recommended</i>)
9	Working distance of the irradiation head	3 - 10mm (<i>5mm recommended</i>)
10	Heat dissipation mode	forced fan heat dissipation
11	Spot uniformity	around 85%

SPECIFICATIONS – LEDs

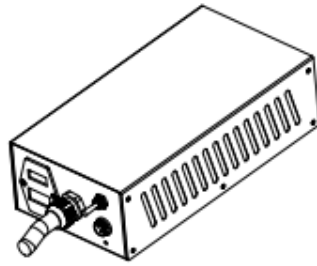
No	Description	Specifications
1	LED Optical wavelength	395 nm
2	UV energy peak	13000 mW/cm ²
3	Surface radiation temperature of the irradiation head	approximately 104°F (40°C) at 10mm distance

INSTALLATION

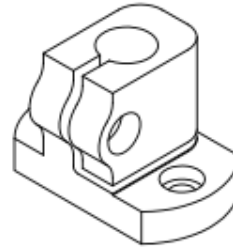
COMPONENT LIST



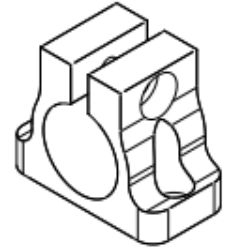
R-CURE



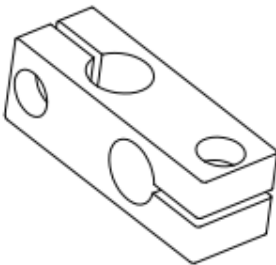
Power control box



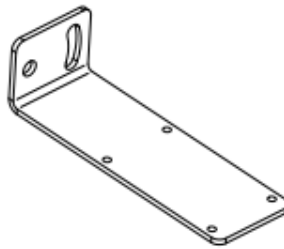
Base clamp



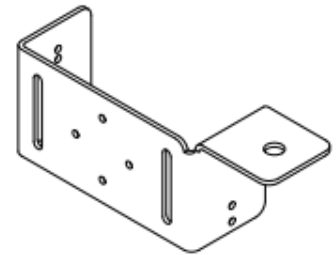
Clamp-mounting



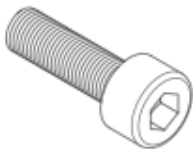
Clamps



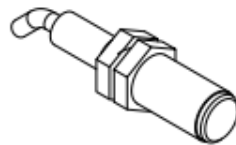
R-CURE
Mounting-bracket



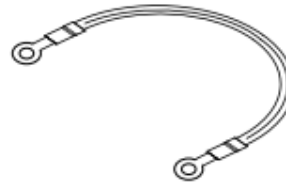
UV Light_Base



Screws



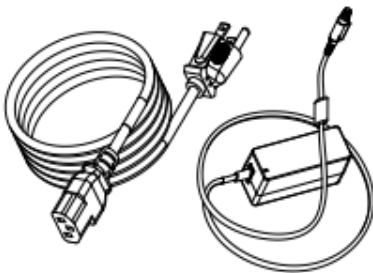
Optical sensor



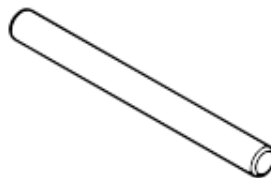
Ground cable



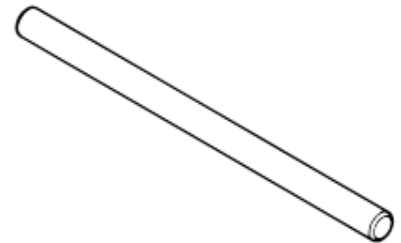
Screw driver



Power adapter

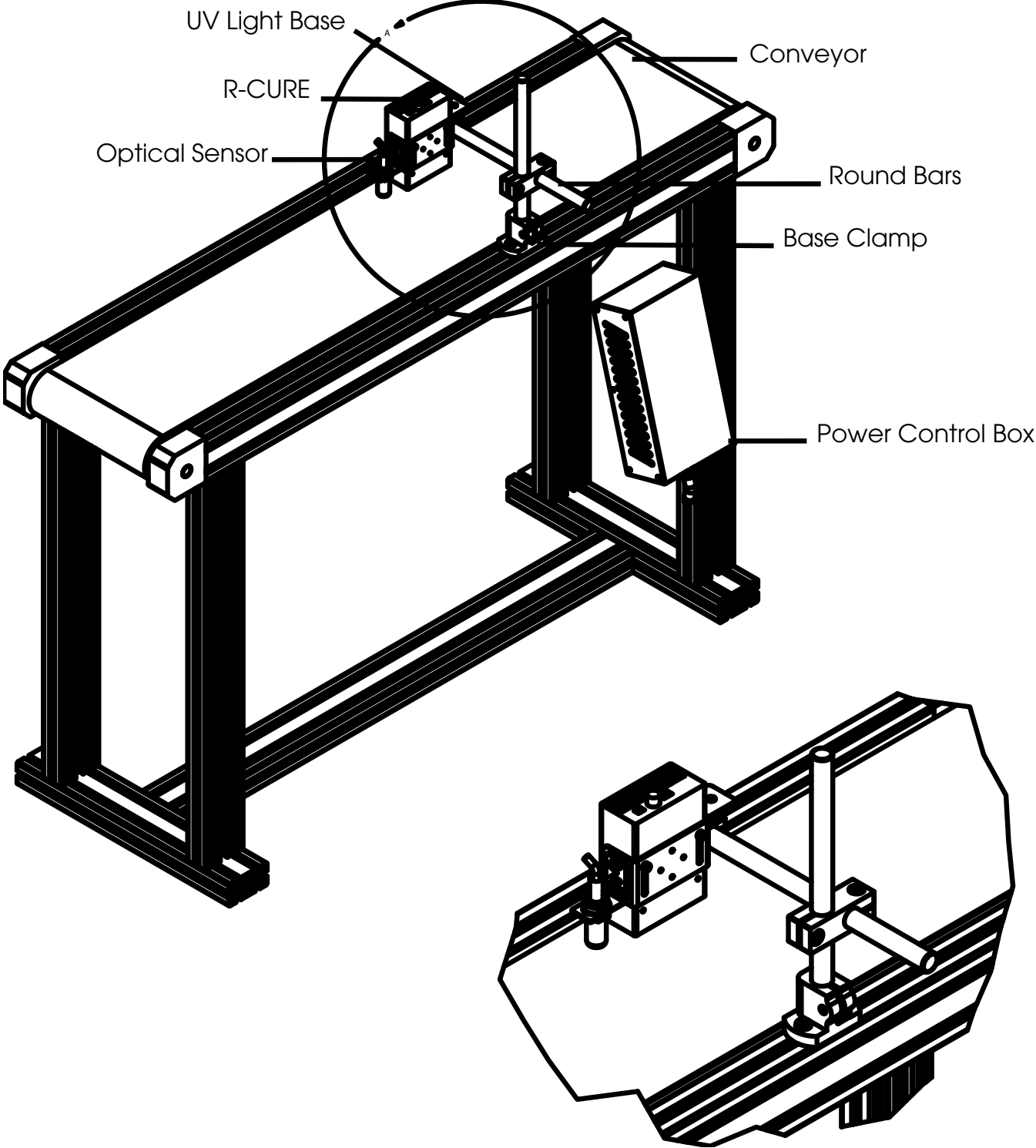


Short roundbars
(200 mm)

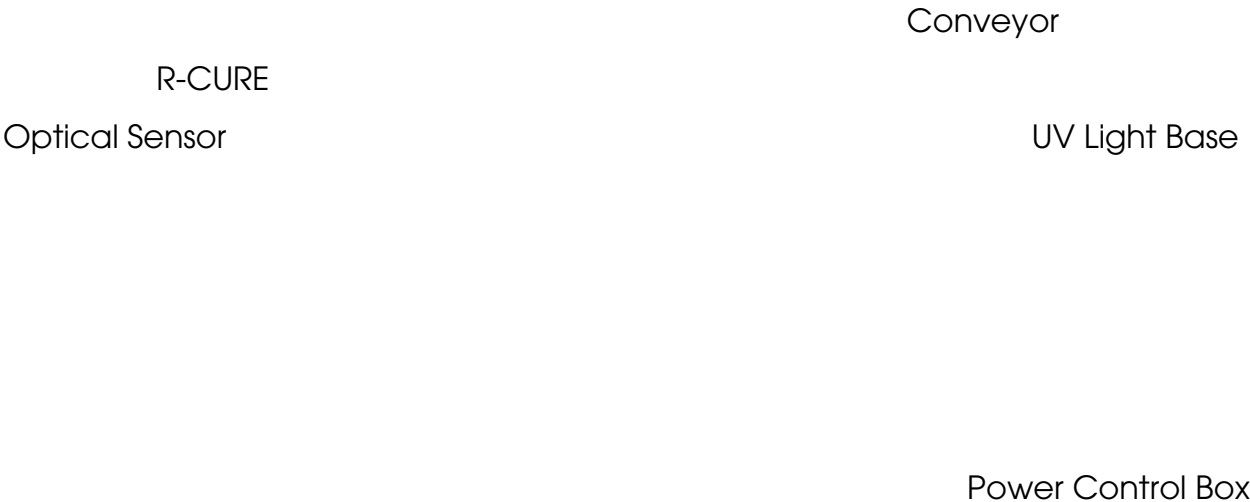


Long roundbars
(300 mm)

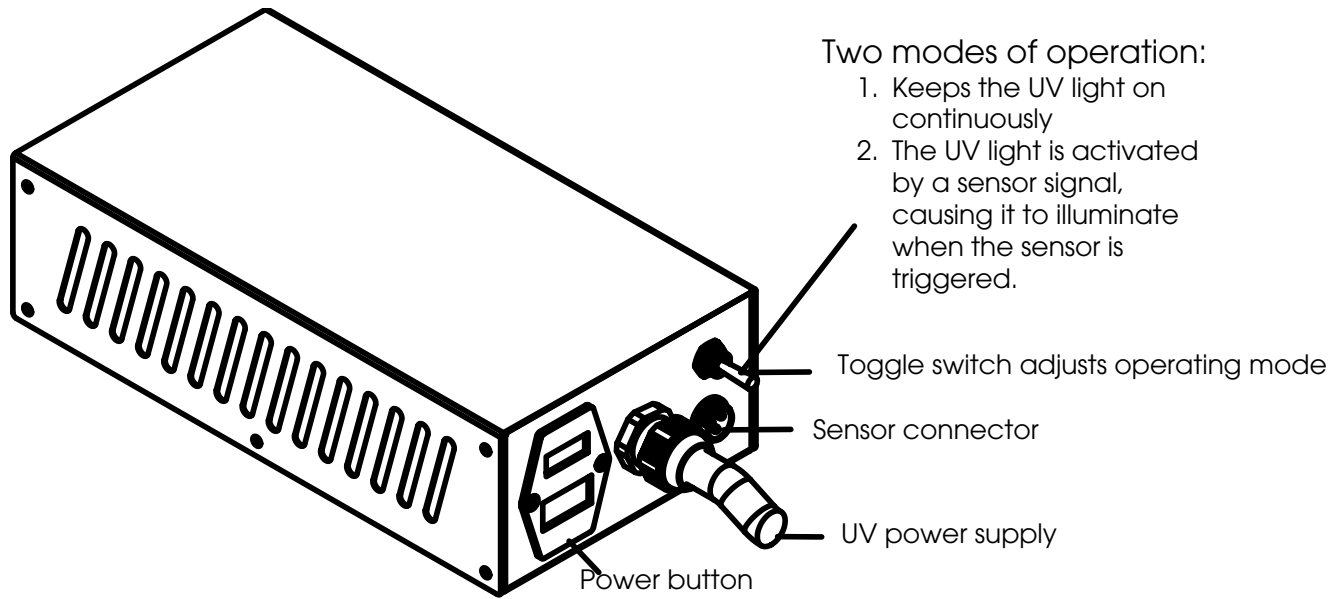
SETUP WITH ROUND BARS AND CLAMPS



SETUP WITH EXTRUDED ALUMINUM

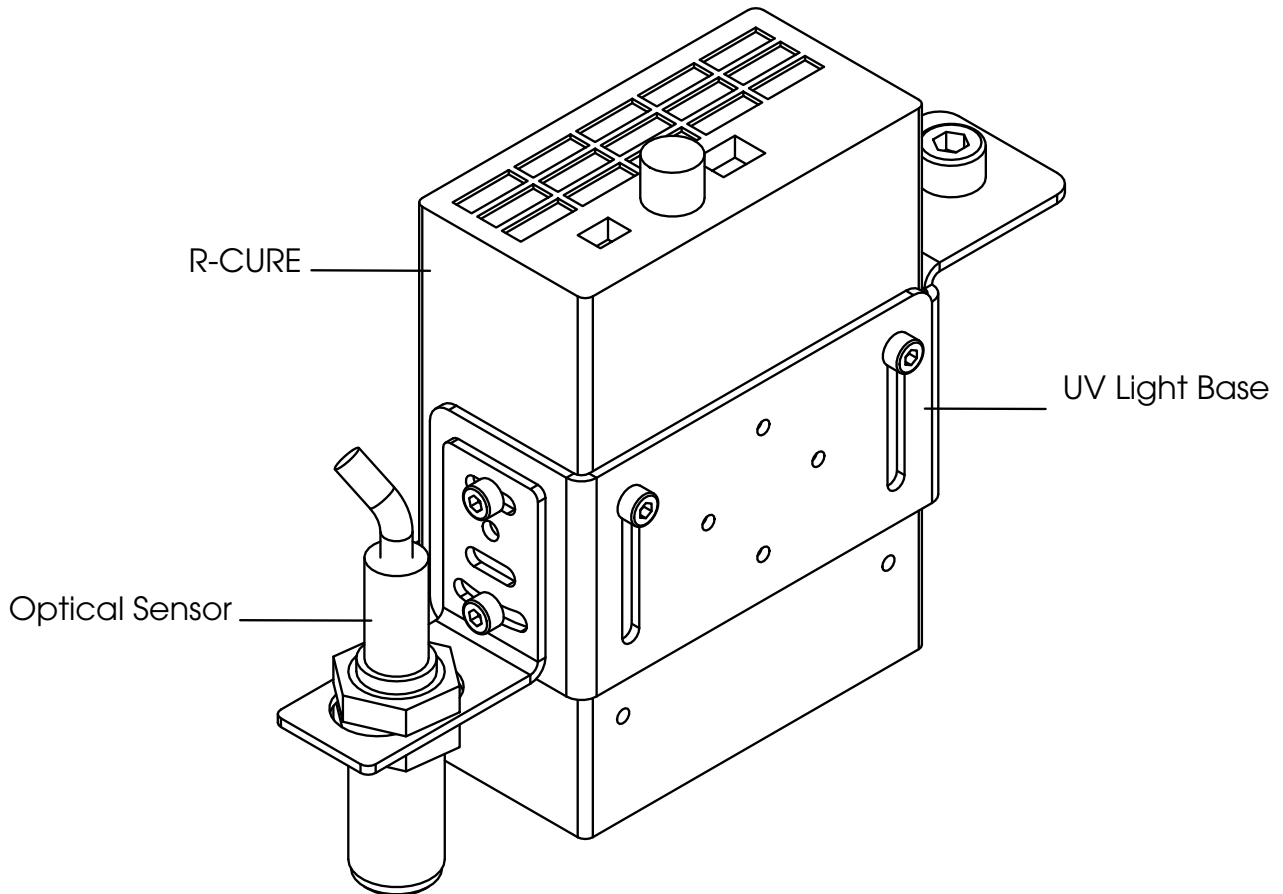


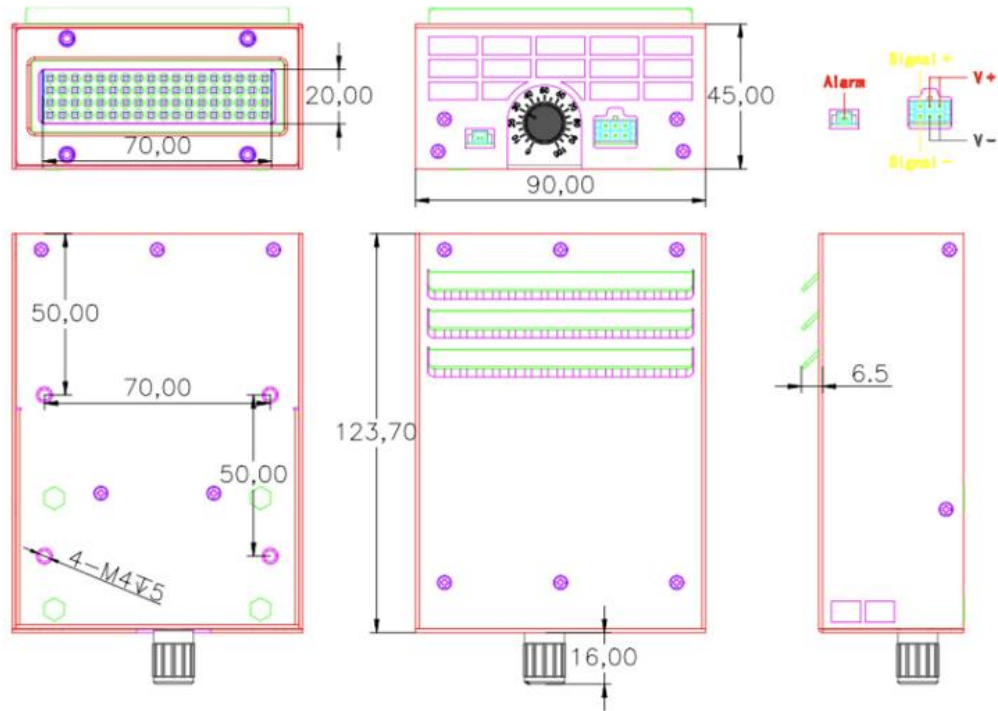
Power control box – Driving power supply



The power supply contains mounting holes to allow users to fasten the housing to a stable object. It is important to keep the surrounding area clean and prevent obstruction of the vents to allow for best heat dissipation. This will prolong the life of the power supply and help prevent any damage.

Irradiation head





The irradiation head comes with a power adjustment knob that allows customers to adjust the power within a range of 0-100%. This enables customers to customize the power output based on the installation height or material travel speed, thereby maximizing the UV irradiation head's light heat conversion efficiency.

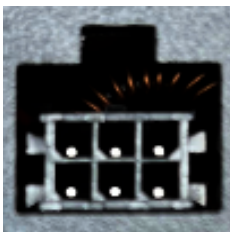
The side of the irradiation head is equipped with four M4 screw holes with a depth of 5mm. Customers can choose to fix the irradiation head into the equipment using these screw holes. At least two screw holes should be used to ensure that the irradiation head is firmly fixed. We recommend using screws with shockproof gaskets to prevent any damage to the equipment.

ASSEMBLY INSTRUCTIONS

Connect the driver power supply to the UV irradiation head as shown below:

- Make sure the power is off.
- Connect the other end of the cable to the 6-pin socket on the UV irradiation head ensuring the connector orientation is correct.

The socket on the UV irradiation head shown below:



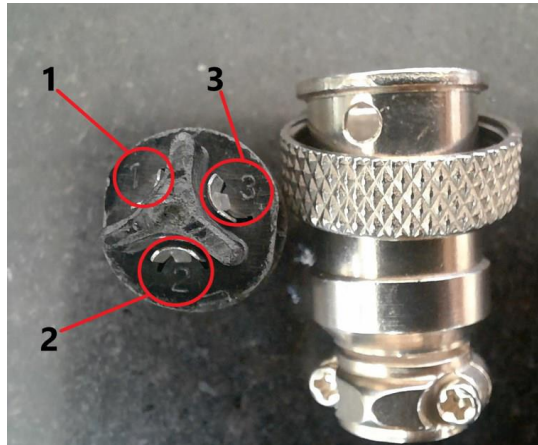
OPERATION

CONTROL SIGNAL DEFINITION

This device is designed to be controlled by a DC5-24V voltage signal.

To use signal control, connect the Sensor (or PLC) to the Sensor connector on the power control box. The device uses NPN signal for control signal connection. When the control signal line receives the trigger voltage, the UV LED turns on. When deactivated, the UV LED turns off.

The Sensor connector pin out is: Pin 1_24V DC; Pin 2_GND; Pin 3_NPN.



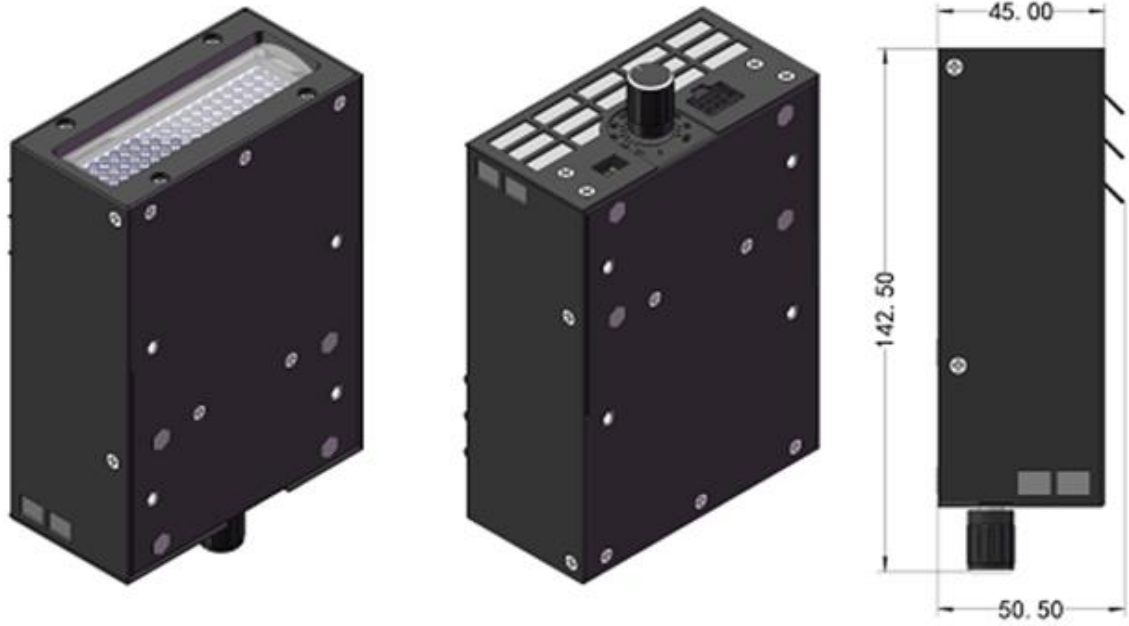
POWER ADJUSTMENT OF UV, LED, IRRADIATION HEAD

- **Adjustment method:** Utilize the potentiometer knob for precise control of the irradiation power of the LED head. Rotate the potentiometer to your desired setting 10%-100%.

OPERATION PROCEDURE

- Connect the control signal according to the signal control mode.
- Adjust the irradiation head's power by turning the potentiometer knob to a setting of 10%.
- Connect the cable between the power supply and the LED irradiation head.
- Switch on the power supply and inspect both the power indicator and the cooling fan operation. In the event of a cooling fan malfunction, the temperature protector will activate to safeguard the LED irradiation head from potential damage caused by excessive heat.

- Apply the driver control trigger signal. If the signal is effective, the irradiation head will light up. Otherwise, it will be turned off.



MAINTAINANCE

WORKING CONDITION INSPECTION

- Check that power socket is connected reliably and properly grounded.
- Ensure the control line connecting to the LED irradiation head is firmly and securely attached.
- Ensure heavy items are not placed on top of the housing of the power supply unit.
- Ensure that the intake and exhaust areas of the power supply and LED irradiation head are clean, and verify that ventilation is unrestricted.
- Ensure the lens on the LED irradiation head is clean.
- Please verify that the connection between the LED irradiation head and the driver is securely fastened.

CLEAN AIR DUCT

WARNING

- Always turn off the machine and disconnect the power before cleaning for safety.
- Users are strictly prohibited from disassembling and cleaning internal components of the equipment.
- Do not use chemically treated dust removal supplies or put them near the equipment.
- Do not use light oil concentrate, diluent, polishing powder, or other similar solvents for cleaning.

CLEANING OF INLET AND OUTLET

- Use a soft dry cloth to wipe the driver housing and the area around the air inlet and outlet.
- If stains cannot be removed, use a dry cloth dipped in a small amount of industrial alcohol or medical alcohol to wipe.

CLEAN THE DUST FILTER SCREEN

- A dust-covered filter screen will seriously affect the heat dissipation effect of the device. Please clean the filter at least once a week.

SOME COMMON ERRORS

NO.	ERRORS	ERROR DESCRIPTIONS	CHECKING INSTRUCTIONS	SOLUTIONS	NOTE
1	The drive power indicator is off	There is no power to the device	Inspect for a burnt-out fuse and ensure the power supply is functioning correctly.	Replace the fuse if it is damaged	
2	The UV irradiation head fails to illuminate.	The UV lamp is either without power or experiencing overheating.	<ol style="list-style-type: none"> 1. Verify that the power supply is correctly connected. 2. Verify if the control signal voltage is within the normal range. 3. Examine the fuse for any damage and determine if it requires replacement. 4. Ensure the temperature protector is untriggered; if activated due to overheating, wait for it to cool before use. 		
3	The irradiation head has low output power.	Lamp power loss can result from factors such as power supply issues and extended usage.	<ol style="list-style-type: none"> 1. Ensure the power supply voltage meets the required standards 2. Check the signal control for any irregularities. 3. Verify the proper connection of the irradiation head and power supply. 4. Confirm that the cooling fan is in good working order and inspect the temperature within the irradiation head for excessive levels. 5. Examine the irradiation head for signs of extended use and consider the need for replacement. 		

4	The irradiation head exhibits uneven light output.	The installation method is incorrect.	<ol style="list-style-type: none"> 1. Verify if the irradiation head is positioned at the recommended height and distance. 2. Check for any obstructions or dirt that might be impeding the irradiation head's light emission. 3. Verify the secure and stable fixation of the irradiation head. 		
5	The cooling fan has stopped running.	The fan could be defective, or there may be an issue with the control circuit's functionality.	<ol style="list-style-type: none"> 1. Check whether the power supply is connected properly 2. Check whether the fan cable is connected properly 3. Check whether the fan is stuck or damaged and needs to be replaced 4. Check whether the temperature protector has been activated and the fan has stopped working to prevent overheating. Please wait for the temperature to drop before trying again. 		

NOTE: Please contact the supplier for assistance if the the troubleshooting steps above do not resolve the fault.