4-Port UV Spot Lights User Manual

WARNING

■ UV is harmful to the eye. A shield should be used when operating the tool.
■ High-intensity light can ignite a fire. Do not place combusting materials at the light focus spot.

1. Introduction

The 4-port Solid-State UV Light uses high-power UV LEDs as light sources for curing UV adhesives. This superior optical design achieves high light coupling efficiency exceeding 85% and uniform light spot intensity.

Each port can be switched on/off either individually by the button on each head or simultaneously by an optional foot switch. The four ports are controlled by a globally same setting of curing time as well as UV output power, values of a timer and power shown on the front panel are as same settings exerted to every four ports. Each LED head features an integrated cooling fan.

Figure 1:   Overall view of the 4-Port UV lights device

2. Specifications

Parameter	Value	Units
Wavelength	275 / 365±5 / 385±5 / 405 / 440	nm
UV radiant flux	0 ~1000	mW
UV irradiance	0 ~ 4*	W/cm²
UVLED driving current	0 ~ 1100	mA
Curing time setting	1 second ~ 18 hours	
UV spot size	Φ5	mm
Working distance	20	mm
Cooling method	forced air, fan	
Operation life	40,000	hours

* Average intensity over the spot size Φ5mm at working distance.

3. Power Supply

The device requires a 100V~240V AC supply. The power on-off rocker switch is embedded in the AC receptacle that is located on the rear panel.

4. Functional Descriptions

4.1. LCD and its display content on the front panel

Power: UV power setting in percentage 0% ~ 100%.   Timer: Curing time setting to maximum 18H:00M:00S

4.2. Rubber buttons on the front panel

POWER: Enters the UV power setting mode.   **UP**: Modify the setting upwards

TIMER: Enters the curing time setting mode.   **DOWN**: Modify the setting downwards.

4.3. Green LED on the front panel

①②③④: Indicates on/off status of each UV port

4.4. Ports on the front panel

Four 4-Pin Sockets: Connectors for UV heads.

4.5. Ports on the rear panel

Synchronizing Foot Switch:

Forces all ports to be synchronously turned on or off.

USB: Not available, preserved for future.

Virtual COM Port: Connects this device to a computer with a USB type-B cable, and then the drive can be controlled by the computer via a Virtual COM Port (VCP).

AC Input: AC power entry and on-off power switch.

Figure 2:   Rear panel

5. Operational Descriptions

5.1. Set the UV power

Push the POWER button to let the Power display blink, then the device enters power setting mode, push UP/DOWN to modify the power setting, setting range is 0% ~ 100% with increasing /decreasing step by 1%, the percentage 100% corresponds to the maximum UV radiant flux. This global power setting exerts its same value on every port.

If no push happens on any button, the device automatically exits the power setting mode after 4 seconds.

5.2. Set the UV curing time

Push the TIMER button to let the Timer display blinking, then the device enters curing time setting mode, push UP/DOWN to modify the curring time setting, setting range is 1 second ~ 18 hours, increasing /decreasing step is 1 of the highest significant digit. This global curring time setting exerts its same value on every port.

If no push happens on any button, the device automatically exits the curring time setting mode after 4 seconds.

5.3. Independent On/Off mode

The device operates in independent mode when the device is not getting in synchronous On mode. In independent mode, the display of curring time does not change; however, if one or more heads are lightening, then the 'S' symbol blinks simultaneously, indicating the curring time of one or more ports is counted down in the background.

5.4. Synchronous On/Off mode

Insert the connector of an Agiltron foot switch into the socket of Synchronizing Foot Switch on the rear panel, pressing the foot switch. Then all lightening UV heads are immediately turned off. On the contrary, if no UV head is lightening, pressing the foot switch, then all UV heads are immediately turned on, and the device enters the synchronous On mode meanwhile the LCD the curring time in countdown mode.

6. VCP Remote Control

6.1. VCP Settings

Baud rate: 9600 bps, data length: 8 bits, parity: none, stop bit length: 1 bit.

6.2. VCP Command Sets

CMD: C0 00 //Check connection status
Echo: C0 01 //UV box is online

CMD: C1 00 //Enable remote control
Echo: C1 01 //Acknowledged

CMD: C2 00 //Disable remote control
Echo: C2 01 //Acknowledged

CMD: C3 0x //Turn on UVx, x: 1, 2, 3, 4
Echo: C3 0x //Acknowledged
            C3 00 //Denied <remote control is disabled>

CMD: C3 FF //Turn on all UVs
Echo: C3 FF //Acknowledged
            C3 00 //Denied <remote control is disabled>

CMD: C4 0x //Turn off UVx, x: 1, 2, 3, 4
Echo: C4 0x //Acknowledged
            C4 00 //Denied <remote control is disabled>

CMD: C4 FF //Turn off all UVs
Echo: C4 FF //Acknowledged
C4 00 //Denied <remote control is disabled>

CMD: C5 xx //Set power percent, Hex data in 01H-64H
Echo: C5 xx //Acknowledged
C5 00 //Denied <remote control is disabled>