



1050x40mm UV LED Array for UV LED Conveyors

User Manual



SKU: 511040

**Thank you for purchasing our products, please read the instruction manual
carefully before use**

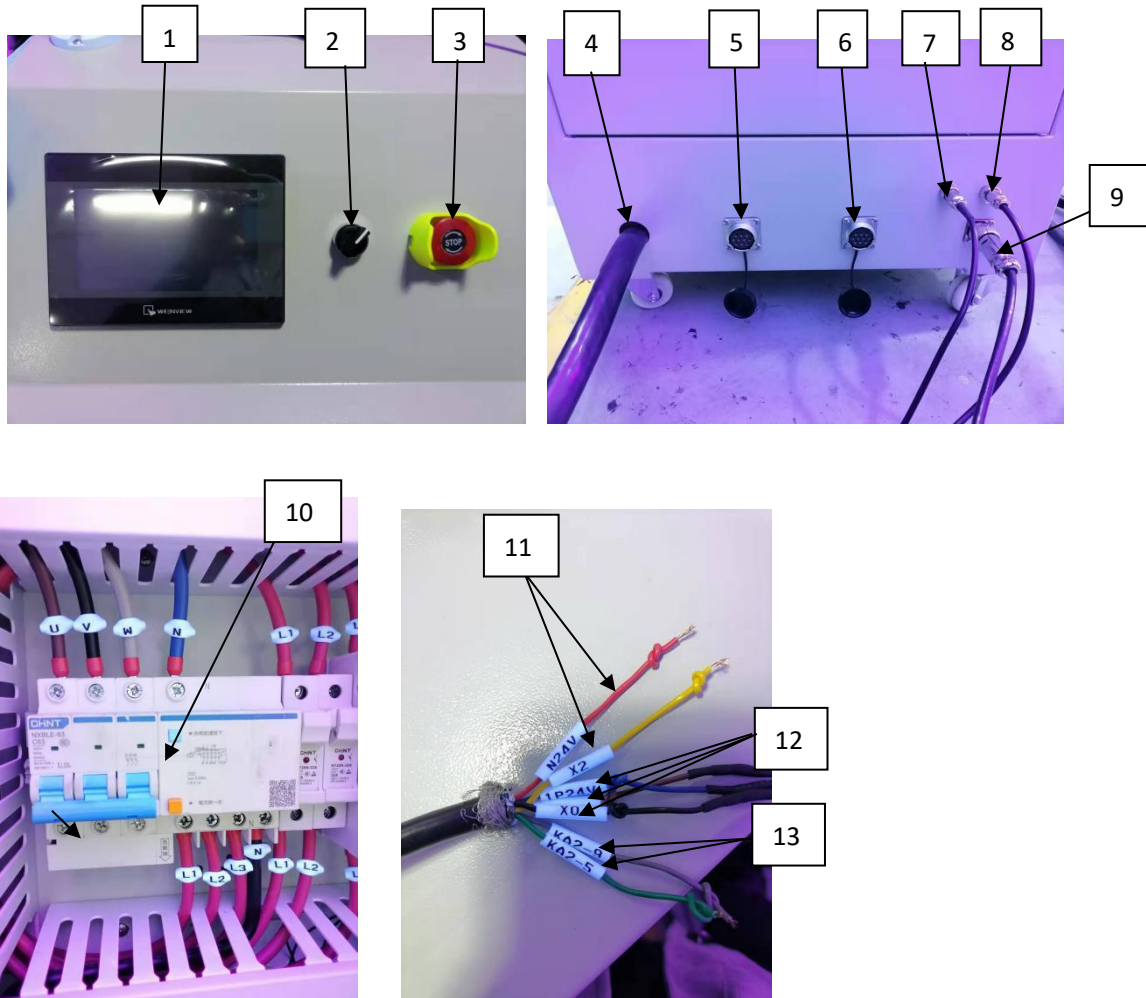
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1. Main structure and working principle

1.1 Main structure



1.Touch screen	Display the current real-time power, temperature, and irradiation time, while starting and stopping the UVLED curing system operation, parameter setting and alarm information viewing.
2.Spin button	Machine control circuit power switch. If you need to turn off the main power, please turn off 10#
3.Stop button	Emergency stop UVLED.
4.Total power input	External power input,AC380V,Three-phase five-wire system

5.UV Connector	Connect one of the two control wires of UVLED
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7.Water chiller alarm line	Connect the alarm signal of the water chiller, when the water chiller alarms (the water chiller outputs a relay normally open contact short circuit signal to turn on pins 1 and 2), the UVLED light turns off. Control the water chiller to turn on (the controller outputs a relay normally open contact short circuit signal, so that pins 3 and 4 are turned on)
8.Temperature detection line	Connect the temperature line interface of UVLED
9.External signal pair interface	Connect the external signal, the printing press start signal (yellow line, red line); UVLED controller alarm abnormal output signal (gray line, green line); printing press speed output signal (brown line 24V + blue line 24V- black line)
10.Main power switch	Turn on or turn off main power switch
11.Printing press start signal	When the printing press is turned on, it will output a relay normally open contact short circuit signal to the UV LED , start the UVLED, please connect according to the wire number, when the yellow wire (X2) and red wire (N24V) are connected, the control light is on
12.Printing press speed output signal	Install an encoder to detect the speed of the printing press. The faster the printing speed, the stronger the UVLED power Brown wire (24V+) Blue wire (24V-) Black (X0)
13.Alarm output signal	When the lamp alarms, output a relay normally open contact short circuit signal to the printing machine, please connect according to the wire number (Gray wire and green wire will be turned on when alarming)

1.2 Working principle

The first step is to turn on the water chiller first, and then turn on the controller. The second step is to enter the parameter setting interface to set the corresponding parameters and turn on the corresponding UV channel (please see the operating instructions for details).

The third step is to wait for the printing press to turn on.

2.Main performance parameters

Dimension	450*500*1000mm (L*W*H)
Power supply	Three-phase AC380V ±5% 50HZ
Control style	PLC control
Wavelength	395nm
Curing area	1050*25mm
Optical power adjustment	0-100% adjustable
Life	20000H
Cooling method	Water cooling
Working environment temperature	-10°C--50°C
Working environment humidity	10%--80%RH No condensation
Power Consumption	≤12KW

3.Installation

Installation precautions: Open the package and check whether the accessories are intact and complete (one controller+UVLED lamp+two UVLED lamp connection lines + one external control line + one temperature monitoring line + one water chiller connection line + a set of blue and transparent water pipes for the water chiller + encoder>manual).

Installation sequence:

1.Fix the location of the water chiller and the controller (the water chiller is not allowed to be installed outdoors, and the water chiller and the controller should be placed on the back of the printing machine as much as possible).

2. Installation steps of water chiller (**note: all water distribution pipes must be tightly sealed, and there is no water leakage**).

(1) Install the water pipe, the water pipe is divided into two, one is the water outlet and the other is the water inlet.

3. After the two water pipes are assembled, they must be placed on the trunking rack on the back of the printing press and fixed.
4. The water pipe installation on the UVLED lamp, the blue pipe is connected to the water inlet, and the transparent pipe is connected to the water outlet.
5. Install the encoder to detect the speed of the printing press, the external signal connection line, and the water chiller connection line.
6. External signal wiring method:

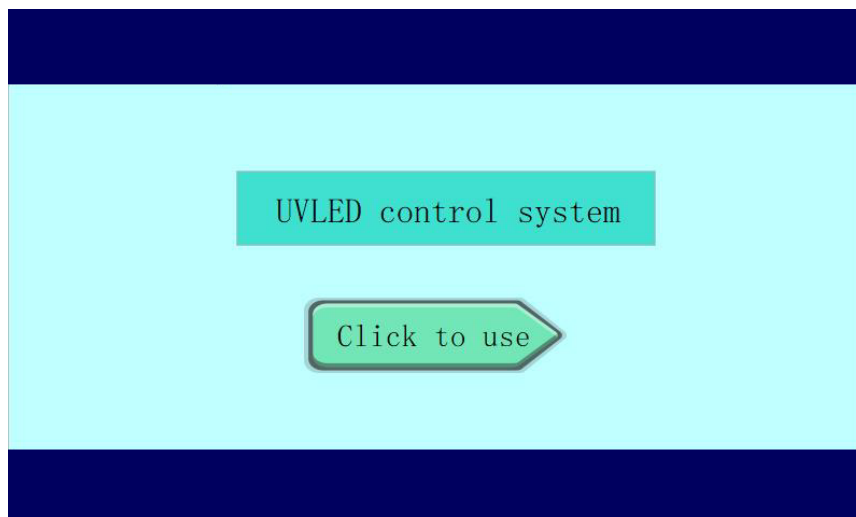
Printing press start signal (yellow line X2; red line 24V-);

Printing press speed output signal (brown line 24V+,blue line 24V-, black line X0);

Controller alarm abnormal output signal (gray line green line).

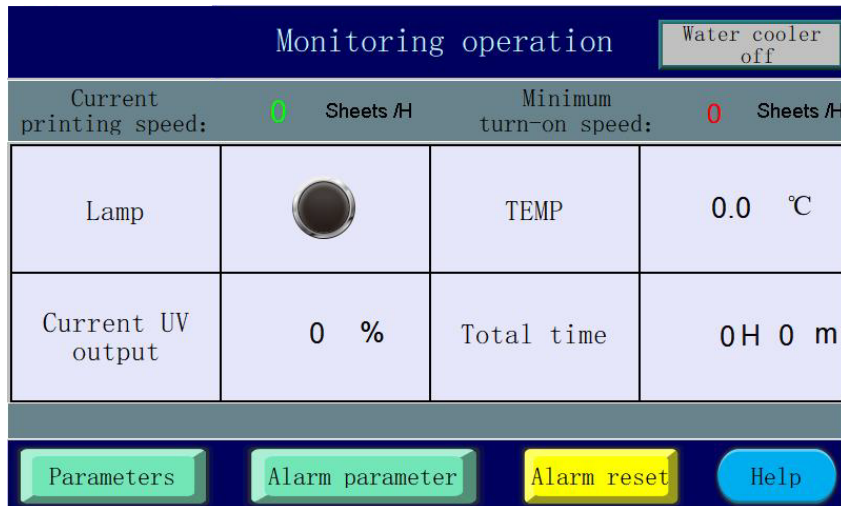
4. Operation instructions

Start interface



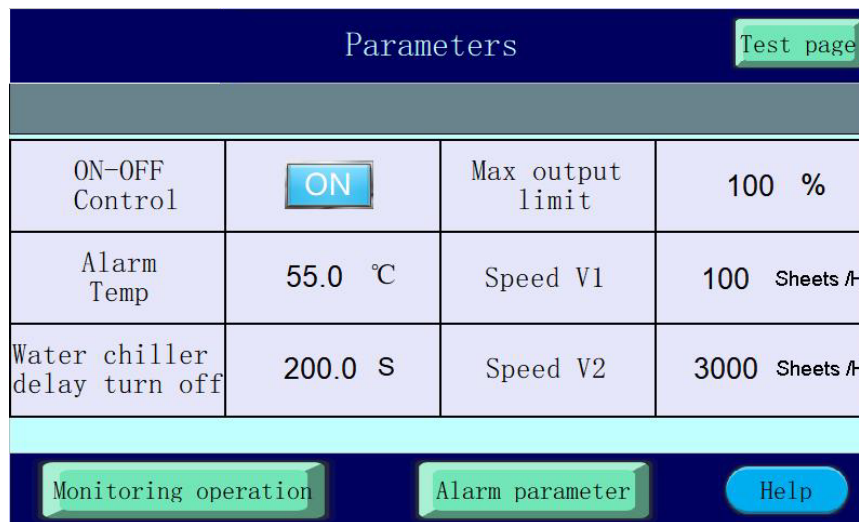
Click the "click to use" button to enter the parameter interface, and then click the monitoring interface.

Monitoring interface



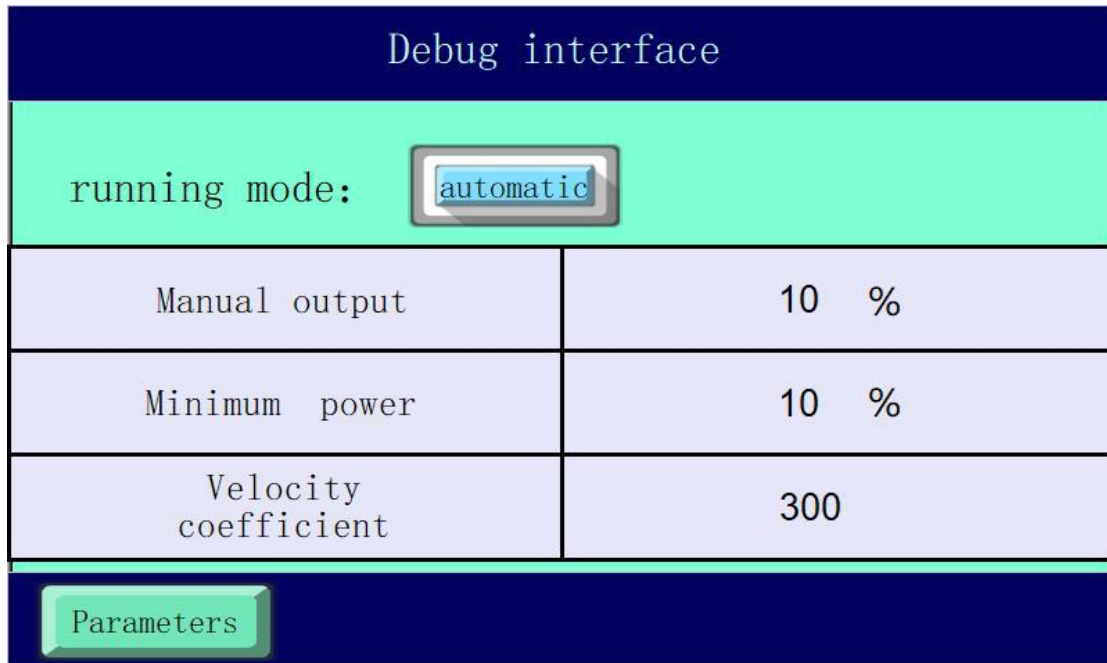
Water chiller control	Water chiller switch, you can turn on or off the water chiller. When the remote control of the water chiller is not connected, this function is invalid.
Current printing speed	Real-time display of press speed
Minimum turn-on speed	The minimum light-on speed setting means that the speed of the printing press is faster than or equal to the set minimum light-on speed, and the UVLED lamp are turned on
Lamp	Current UV channel status indicator
Current UV output	Current UV channel output power display
TEMP	Real-time temperature display of current UVLED channel
Total time	The total historical irradiation time of the current UV channel
Parameters	Click this button to enter the parameters interface
Alarm reset	Alarm reset button, when an alarm occurs on the controller, click this button after the alarm is eliminated
Alarm Parameter	Click this button to enter the alarm interface
Help	Click this button to enter the help interface


Parameters

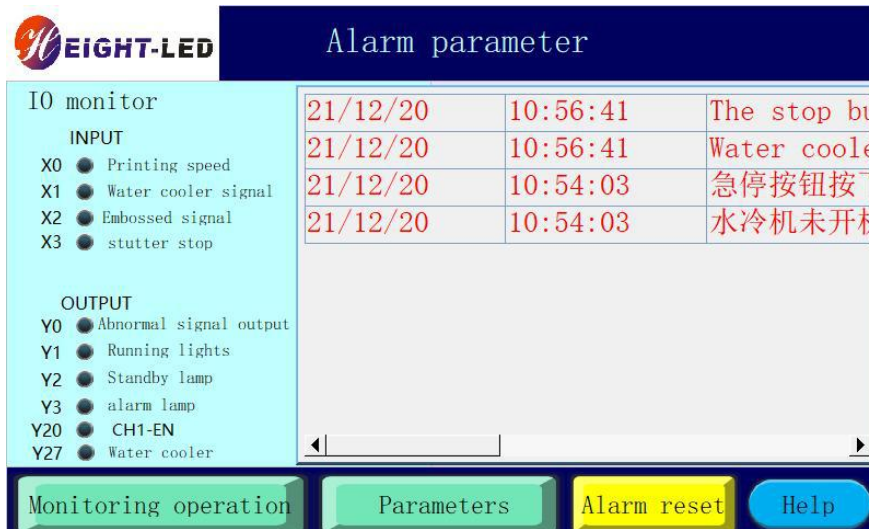


ON-OFF Control	UV channel selection switch
Alarm Temp	When the real-time temperature of the UVLED is greater than the alarm setting temperature, the UVLED is forcibly turned off and an alarm occurs (the alarm temperature is set to 55°C)
Water chiller delay turn off	The water chiller automatically delays the off time. When the UV light is off, but the water chiller is on, the water chiller will automatically turn off after this delay. When the remote control of the water chiller is not connected, this function is invalid
Max output limit	UVLED lamp upper limit output power setting, refers to the maximum output power of UVLED
Speed V1	The initial speed of UVLED output power automatic adjustment (please see the help description for details)
Speed V2	The highest speed of UVLED output power automatic adjustment (please see the help description for details)
Monitoring operation	Click this button to enter the monitoring interface
Alarm Parameter	Click this button to enter the alarm interface
Help	Basic parameter setting description and basic operation introduction
Test page	This button is the manufacturer's system parameter, password "891227 " is required to enter

Debug interface

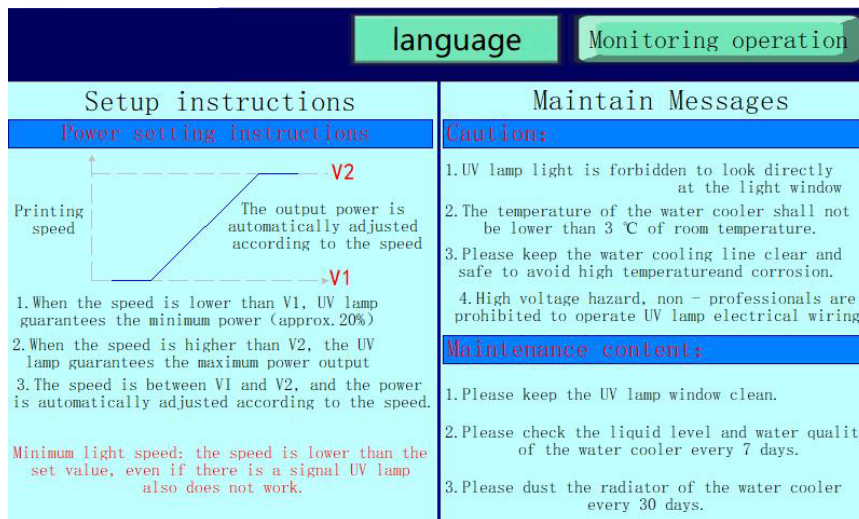


Running mode	Automatic mode, UVLED lamp is controlled by external switch, manual mode is not controlled by external, it will be restored to automatic state after every power off and restart
Manual output	In manual mode, the power of UVLED on
Minimum power	UVLED lamp lower limit output power setting, refers to the minimum output power of UVLED lamp
Velocity coefficient	Detect the coefficient of printing speed, adjust this value to make it consistent with the actual printing value 
Parameters	Click this button to enter the parameters interface



Alarm view interface


View historical alarm information and conventional IO signals for fault analysis.



Help

Help: Basic parameter setting instructions and basic operating instructions. After completing the water chiller connection, power cord connection, UVLED lamp installation and connection, water cooling signal line connection, external control signal line connection, and encoder connection, you can refer to the following example operations.

Quick operation example:

Click , enter the parameter interface, input parameters

Alarm Temp	55.0 °C	55,	Water chiller delay turn off	200.0 S
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 200,

Automatic mode	<div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <div style="border: 1px solid black; padding: 2px;">Max output limit</div> <div style="border: 1px solid black; padding: 2px;">100 % 100 ,</div> <div style="border: 1px solid black; padding: 2px;">Speed V1</div> <div style="border: 1px solid black; padding: 2px;">100 Sheets /H 100,</div> </div> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <div style="border: 1px solid black; padding: 2px;">Speed V2</div> <div style="border: 1px solid black; padding: 2px;">3000 Sheets /H 3000,</div> </div>
	<p>Click Test page select the administrator, enter the password 891227, enter the debugging interface, enter the parameters</p> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <div style="border: 1px solid black; padding: 2px;">Minimum power</div> <div style="border: 1px solid black; padding: 2px;">10 %</div> </div>
	<p>Adjust parameters repeatedly</p> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <div style="border: 1px solid black; padding: 2px;">Velocity coefficient</div> <div style="border: 1px solid black; padding: 2px;">300</div> </div> <p>Make the speed of the monitoring page equal to the actual speed of the printing press,</p> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <div style="border: 1px solid black; padding: 2px;">Current printing speed:</div> <div style="border: 1px solid black; padding: 2px; color: green;">0</div> <div style="border: 1px solid black; padding: 2px;">Sheets /H</div> </div>
	<p>Click Parameters ,enter the parameter interface,</p> <p>click</p> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> <div style="border: 1px solid black; padding: 2px;">ON-OFF Control</div> <div style="border: 1px solid black; padding: 2px; color: blue;">ON</div> </div>
	<p>Waiting for the start signal and speed signal, the UVLED lamp will turn on when the printing press starts, and the</p>

5. Common faults and solutions

Failure phenomenon	Cause of issue	Approach
No power on	Poor contact of the power cord	Check the power interface, whether the power cord plug is in good contact.
	Leakage protection tripped or fuse blown	Open the electric control cabinet of the machine and check whether the leakage protector and the fuse are normal and whether they are in good contact.

Water chiller alarm	<ol style="list-style-type: none"> 1. Check whether the alarm line is connected properly. 2. Check whether the water chiller is malfunctioning. 	<ol style="list-style-type: none"> 1. Restore the signal to normal. 2. Troubleshoot the water chiller.
High temperature alarm	<ol style="list-style-type: none"> 1. The water chiller is faulty and the cold water does not circulate. 2. The alarm temperature setting is too low. 3. The temperature sensor is faulty. 	<ol style="list-style-type: none"> 1. Check the cold water pipe and valve to keep it unobstructed. 2. Set the alarm temperature high, 45-55°C. 3. Enable the spare temperature sensor. (Contact manufacturer)
UV LED lamp does not light up	<ol style="list-style-type: none"> 1. The control line is loose or the wrong line is connected. 2. An alarm occurs. 3. Water leaks, water flows into the lamp 4. other reasons 	<ol style="list-style-type: none"> 1. Connect wires strictly according to the wire number and tighten the screws. 2. Eliminate the alarm according to the touch screen prompts. 3. Contact the manufacturer to provide fault analysis.

6. Equipment service

1. Inspect the controller once a day to ensure that the cooling fan of the controller is working properly.
2. Turn on the light to check whether the UV LED lamp is irradiated according to the set power, if it is abnormal, stop working, contact the staff for inspection, or contact the manufacturer.
3. The equipment should be maintained for one month, and the UVLED glass should be inspected to check whether it is polluted and whether the UV lamp is aging.

7. Precautions

1. Make sure that the power cord is in good contact and the ground wire is reliably grounded!
2. Please ensure that the working voltage of the UV LED curing system is stable and normal!
3. Mismatched power frequency will cause damage to the machine !
4. This product is industrial equipment, please do not let non-professionals operate it!
5. Do not direct UVLED light to eyes or skin, which may cause hurt.

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