

INDUSTRIAL UV CURING / PRODUCT GUIDE

SL SERIES

Water-Cooled LED UV Curing Equipment

Series product brochure

**395 ± 5 nm**

Center wavelength

0–100%

Energy adjustment

Water cooling

Cooling method

FHES / LED UV CURING SOLUTIONS

01 / Series overview

Compare six configurations in one table

Select by power, rated irradiance and control method. All models use planar irradiation and water cooling.

Product model	Electrical power	Irradiance* mW/cm²	Adjustment method	Switching / trigger method
SL6040-B1	400 W	≥13,000	Variable-energy control	On/off / printer-synchronized trigger / variable-energy control
SL6040-V1	400 W	≥13,000	Knob-resistance control	On/off / printer-synchronized trigger
SL6545-B1	800 W	≥17,000	Variable-energy control	On/off / printer-synchronized trigger / variable-energy control
SL6545-V1	800 W	≥17,000	Knob-resistance control	On/off / printer-synchronized trigger
SL8060-B1	800 W	≥13,000	Variable-energy control	On/off / printer-synchronized trigger / variable-energy control
SL8060-V1	800 W	≥13,000	Knob-resistance control	On/off / printer-synchronized trigger

Common technical conditions			
Parameter	Specification	Parameter	Specification
Input power	AC 220 V / 50 Hz	Center wavelength	395 ± 5 nm
Irradiation pattern	Planar irradiation	Irradiation distance	5–100 mm / depending on the application
Energy adjustment	0–100%	Turn-on time	≤0.3 s

* The source does not state the test distance or measurement conditions for irradiance. Final selection should be validated with actual ink, material and line-speed samples.

02 / Common water-cooled control unit

One control unit across the series

The series uses the same water-cooled control enclosure. Models differ mainly in lamp-head size and control configuration.

Common control unit / appearance and dimensions



Connection and control points

01 Power

AC 220 V / 50 Hz input.

02 Water circuit

Water supply, return and circulation status.

03 Lamp head

Lamp cable, mounting and irradiation direction.

04 Signals

Check against the B1 / V1 configuration.

Control-unit dimensions: 500 × 264 × 380 mm (L × W × H). Allow room for hoses and maintenance during installation.

Status, output and water circuit at a glance

The front-panel illustration retains all labels so operators can identify controls by position.

Control-unit front panel / Equipment labeling diagram



Key points for on-site identification

Water Circulation Control	Temperature, water-flow and maintenance indications and control buttons are on the front panel.
---------------------------	---

Output and power	The output-adjustment knob, output display and power switch are labeled.
------------------	--

Identify the position of each connection

The rear-panel diagram identifies connections for the water hoses, signal cable, lamp-head cable and power supply.

Control-unit rear panel / Equipment labeling diagram



AI-generated

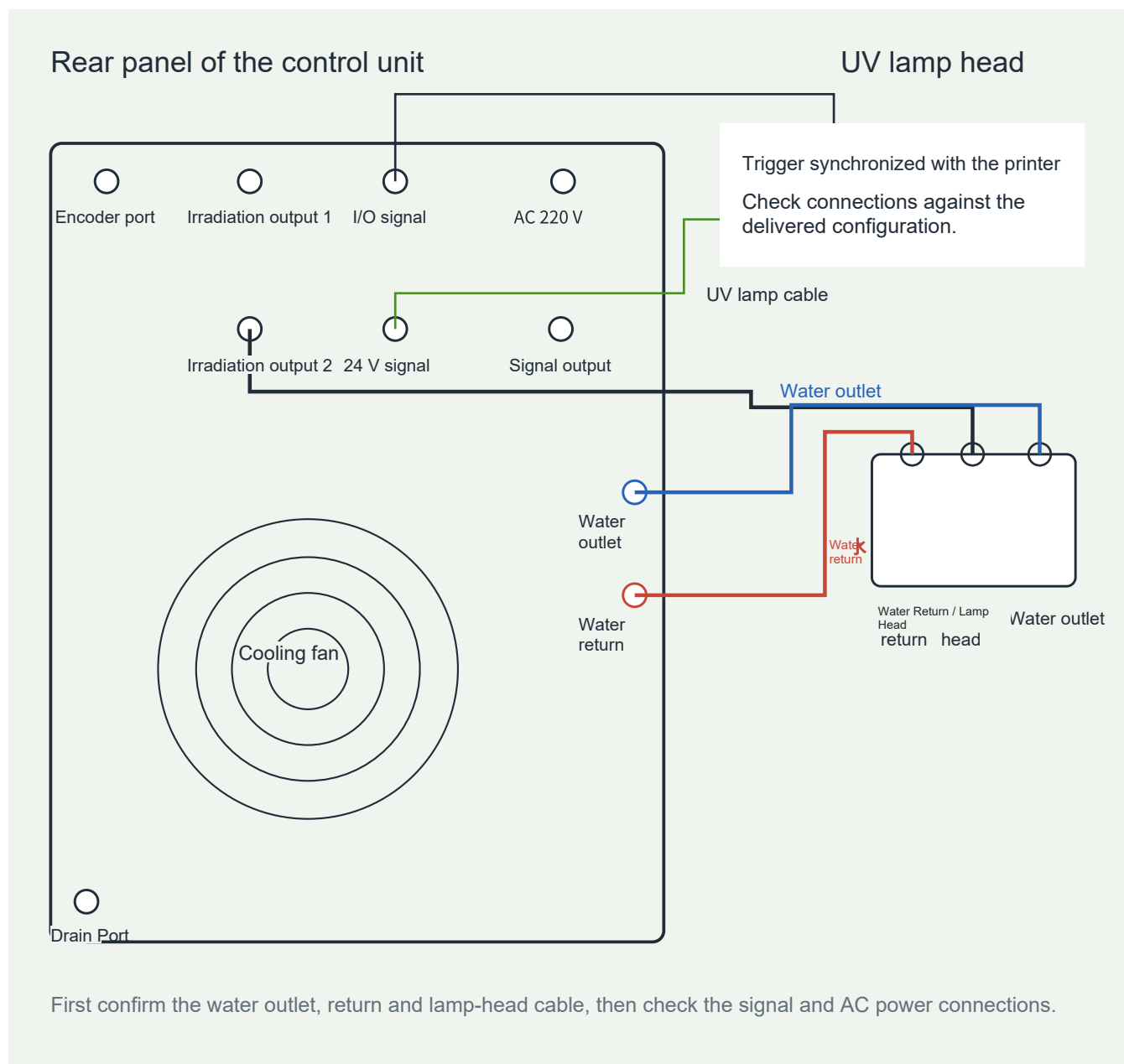
Wiring and hose checks

Water circuit	Identify the water outlet, return and drain. Check hoses for kinks after connection.
---------------	--

Cable harnesses	Identify the lamp-head outputs, signal ports and AC 220 V power input.
-----------------	--

Connection positions and relationships

The installation diagram redraws wiring, water hoses and trigger signals. Use the labels on the actual unit to confirm each connector.



03 / Lamp-head dimensions and mounting holes

Lamp-head dimensions and mounting holes

Dimensions are given as L × W × H. Mounting-hole distances are center-to-center measurements from the source, in mm.

Dimensions and hole-spacing reference

Applicable model	Four-hole spacing on bottom	Side-hole spacing	Two-hole spacing on end face	Fasteners
SL6040-B1 / V1 Dimensions: 90 × 59 × 60 mm	80 × 45	30 / 65	30	M4 / hole depth 6
SL6545-B1 / V1 Dimensions: 105 × 89 × 65 mm	88 × 76	30 / 64	45	M4 / hole depth 6
SL8060-B1 / V1 Dimensions: 105 × 89 × 65 mm	88 × 76	30 / 64	45	M4 / hole depth 6

Check before bracket fabrication

Hole spacing follows the revised data in this edition. Check the delivered lamp head's mounting face and nameplate before fabricating brackets.

Recommended installation clearance

Allow for hose bend radius, lamp-cable routing and maintenance as well as mounting holes. Use M4 screws; the source states a hole depth of 6 mm.

04 / Model details

SL6040 | 400 W Water-Cooled UV Curing

Each lamp-head specification offers variable-energy and knob-adjustment versions.

400 W

Rated electrical power

≥13,000 mW/cm²

Rated irradiance stated in the source

Rated irradiance ≥13,000 mW/cm²; select an irradiation distance of 5–100 mm according to the application.

Version and control configuration

Model	Adjustment method	Switching / trigger method
SL6040-B1	Variable-energy control	On/off / printer-synchronized trigger / variable-energy control
SL6040-V1	Knob-resistance control	On/off / printer-synchronized trigger

Lamp-head mounting-hole spacing

Four bottom mounting holes have 80 × 45 mm center spacing; two end-face holes have 30 mm center spacing.
Side-hole spacing: 30 / 65 mm.

See page 2 for common wavelength, irradiation pattern, water cooling and electrical conditions.

05 / Model details

SL6545 | 800 W Water-Cooled UV Curing

In the three main series, the original information was marked as the highest irradiation group.

800 W

Rated electrical power

$\geq 17,000 \text{ mW/cm}^2$

Rated irradiance stated in the source

Rated irradiance $\geq 17,000 \text{ mW/cm}^2$. Actual curing performance should be verified with process samples.

Version and control configuration

Model	Adjustment method	Switching / trigger method
SL6545-B1	Variable-energy control	On/off / printer-synchronized trigger / variable-energy control
SL6545-V1	Knob-resistance control	On/off / printer-synchronized trigger

Lamp-head mounting-hole spacing

Four bottom mounting holes have 88 × 76 mm center spacing; two end-face holes have 45 mm center spacing.

Side-hole spacing: 30 / 64 mm.

See page 2 for common wavelength, irradiation pattern, water cooling and electrical conditions.

06 / Model details

SL8060 | 800 W water-cooled curing

B1 and V1 are listed separately by control configuration.

800 W

Rated electrical power

≥13,000 mW/cm²

Rated irradiance stated in the source

Both versions are 395 ± 5 nm and 800 W. Confirm connectors and mounting holes for the delivered configuration.

Version and control configuration

Model	Adjustment method	Switching / trigger method
SL8060-B1	Variable-energy control	On/off / printer-synchronized trigger / variable-energy control
SL8060-V1	Knob-resistance control	On/off / printer-synchronized trigger

Lamp-head mounting-hole spacing

B1 / V1: four bottom holes at 88 × 76 mm and two end-face holes at 45 mm.

Use M4 screws. The source specifies a 6 mm hole depth; check the actual mounting face before fabricating brackets.

Side-hole spacing: 30 / 64 mm.

See page 2 for common wavelength, irradiation pattern, water cooling and electrical conditions.

07 / Production-line integration

Check water, lamp head, signals and power in turn

Check connector labels and delivered cable harnesses before connection. Then verify water circulation, trigger response and curing performance.

01**Water circuit**

Check tank level, supply and return connections, and unobstructed hoses. Never start without water.

02**Lamp head**

Secure the lamp head and connect its cable. Check the distance from emitting surface to material.

03**Signals**

For B1 / V1, check on/off and printer-synchronized triggering.

04**Power supply**

Check the AC 220 V / 50 Hz input and grounding requirements.

05**Commissioning**

Adjust energy within 0–100%, then test with the actual ink, material and line speed.

Sample acceptance

Record the energy setting, irradiation distance, line speed and material. If curing is insufficient, first check settings and the lamp-head emitting surface.

Start with observable symptoms

These shared maintenance and troubleshooting points follow the source. Qualified personnel must perform live measurements, disassembly and part replacement.

Routine maintenance	
Item	Source requirement
Maintenance interval	About 3 months; adjust for the operating environment.
Coolant and dust removal	Remove dust from the condenser and use acid-free, alkali-free purified water or coolant.
Long-term shutdown	Drain the tank after approximately 2 months or more out of service.
Fault symptoms / first checks	
On-site symptom	Where to check
Water-flow alarm lamp is off	Check tank level, water flow and kinked hoses. If the fault persists, contact the manufacturer to inspect the sensor.
High-temperature alarm	Check water temperature and cooling status. Do not rely on touch alone to decide whether operation may continue.
Maintenance reminder	Clean dust from the fan, enclosure and finned heatsink; reset as indicated on the equipment panel.
No alarm, lamp is off	Check trigger signals and cable harnesses first. Qualified personnel should diagnose the lamp head and driver supply.
Lamp is on, curing is insufficient	Check the energy setting, emitting-surface contamination and whether cleaning fluid has mixed with the ink.

The factory water-circulation alarm temperature is 60 °C. Verify it against the equipment condition and application on site.

09 / Selection and source notes

Verify specifications on the actual production line

Models and mounting-hole spacing support initial selection. Verify against the delivered unit and sample results before ordering, bracket fabrication and production.

Selection checklist

01 Choose lamp-head series

Select SL6040, SL6545 or SL8060 according to the 400 W or 800 W requirement.

02 Choose control version

Choose B1 or V1 according to variable-energy or knob-adjusted control.

03 Check mounting holes

Check this brochure's hole-spacing table against the actual mounting face before making brackets.

04 Run process samples

Verify the intended ink, material, line speed, irradiation distance and curing quality.

FHES

Product enquiries: 0574-87296000