

OmniCure LX500

Ultra-Compact UV LED
Spot Curing System for
a Consistent, Repeatable
Curing Process



Outstanding optical stability via Intelli-Lamp®
LED technology

Exceptionally high peak irradiance for increased
curing efficiency

Calibration utility to maintain long term stability
of UV light

Unparalleled process control with StepCure® 2.0

Programming and data logging in real time via
a Micro SD

Updated electronics to support higher power output

Next generation LED Heads and custom heads



OmniCure LX500 controller available in 2 or 4 channel configurations.



Outstanding Optical Stability

The OmniCure® LX500 system is designed with proprietary Intelli-Lamp LED technology that monitors LED head temperature, lifetime data, and automatically maintains optical stability +/- 5% during an exposure. Available in either 2 or 4 channel configurations, the OmniCure LX500 is the most flexible and cost effective option for industrial manufacturing. The V3 LED heads deliver exceptional peak irradiance of up to 16.8W/cm² (365nm), 27.3W/cm² (385nm), 27.0W/cm² (395nm), 23.8W/cm² (405nm) using a 3mm focusing lens at a 10mm working distance.

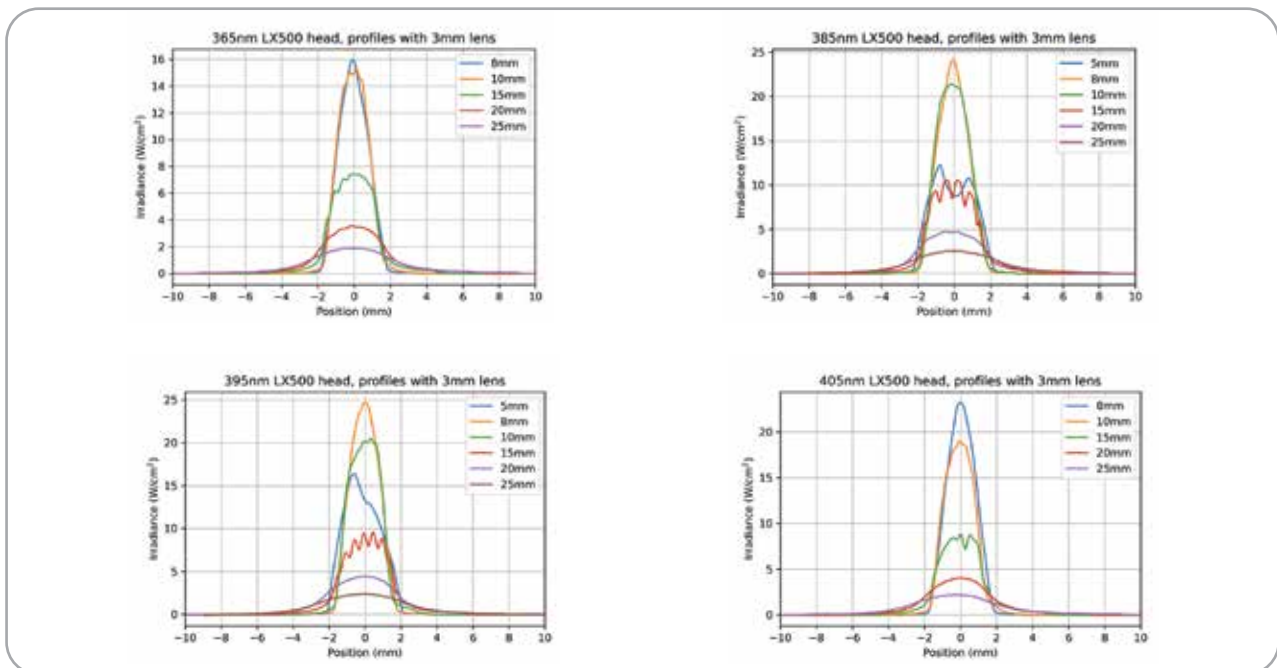
Exceptional Process Control

For long term stability of the light source, the new LED heads can be calibrated to tight tolerances to ensure a repeatable curing process, and precise control of the UV irradiance. The OmniCure LX500 features StepCure 2.0 which allows the operator to program different profiles within a single LED head or multiple LED heads across each channel. With StepCure 2.0, the operator can set exposure time, intensity level, dwell rate

and trigger source. The LX500 combined with high power UV LED heads provide fast, even curing of UV adhesives for superior product quality, rapid production, and lower manufacturing costs. The V3 LED heads are offered in 55mm and 130mm lengths and in 365nm, 385nm, 395nm and 405nm wavelengths. These new and improved LED heads are color coded to indicate wavelength and reduce setup time.

Easy Integration

The compact size of the OmniCure LX500 allows for easy integration into any process setup. The LX500 is equipped with a newly designed 2.4cm full color LCD that can be controlled using a four way keypad, by a programmable logic controller (PLC), or via USB connected directly into a PC. The Micro SD technology provides additional programming capabilities and allows application data and error faults to be recorded in real time. The OmniCure LX500 features improved connectors that are easier to install and remove with an integrated locking mechanism.



V3 UV LED Heads

The next generation V3 UV LED heads offer improved optical output while delivering highly efficient cooling to maximize continuous operation without over-heating. These features minimize costly downtime and extend the life of the LED heads, giving low ownership cost and convenience that manufacturers can rely on. Due to its superior design, when properly clamped, the LED head may be used continuously while remaining cool. The UV LED heads use a HDMI connector with an auto-lock feature that minimizes set up and installation time.

OmniCure®
UV Curing • In Control



Focusing Lenses

OmniCure UV LED heads use replaceable focusing lenses that offer the flexibility essential to meet the spot size and irradiance level required for a specific application. Beam profiles for the OmniCure 365nm, 385nm, 395 and 405nm UV LED Heads with the 3mm lenses are illustrated. Additional beam profiles and technical information are available on our website.

LED Calibration and Beam Positioning

The ability to calibrate and accurately measure light intensity from a UV LED spot curing system is challenging for the UV assembly manufacturer and is a critical piece to controlling a UV curing process. The OmniCure LX500 controller is designed with an integrated radiometer that, when combined with a precise LED positioning fixture, allows operators to efficiently set and measure the peak irradiance accurately and consistently in a UV process within a manufacturing environment.

Key Benefits

- Consistent measurements by accurately positioning the beam on the detector aperture
- Reduction in calibration time and cost with its easy to use alignment tool
- Elimination of the need for expensive and bulky alignment tools

StepCure - Programming Multiple Steps or Multiple Heads

The OmniCure LX500 includes StepCure technology that allows the operator to configure input signals for triggering a step profile of one or more heads via its digital user interface. StepCure allows a variety of profile set-ups for:

- Running a sequence of exposures on one head, at varying times and intensities
- Running a sequence of exposures on multiple heads, at varying times and intensities
- Running parallel exposures on multiple heads, each at different times and intensities
- Programming multiple profiles for the same head from different trigger sources

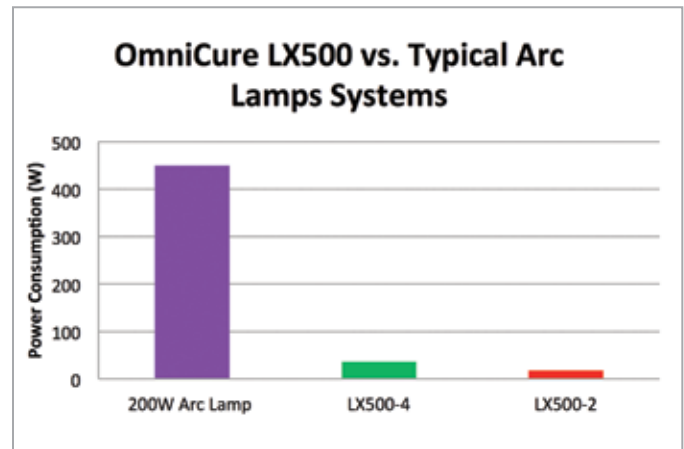


Example 1: Setting up a StepCure Profile

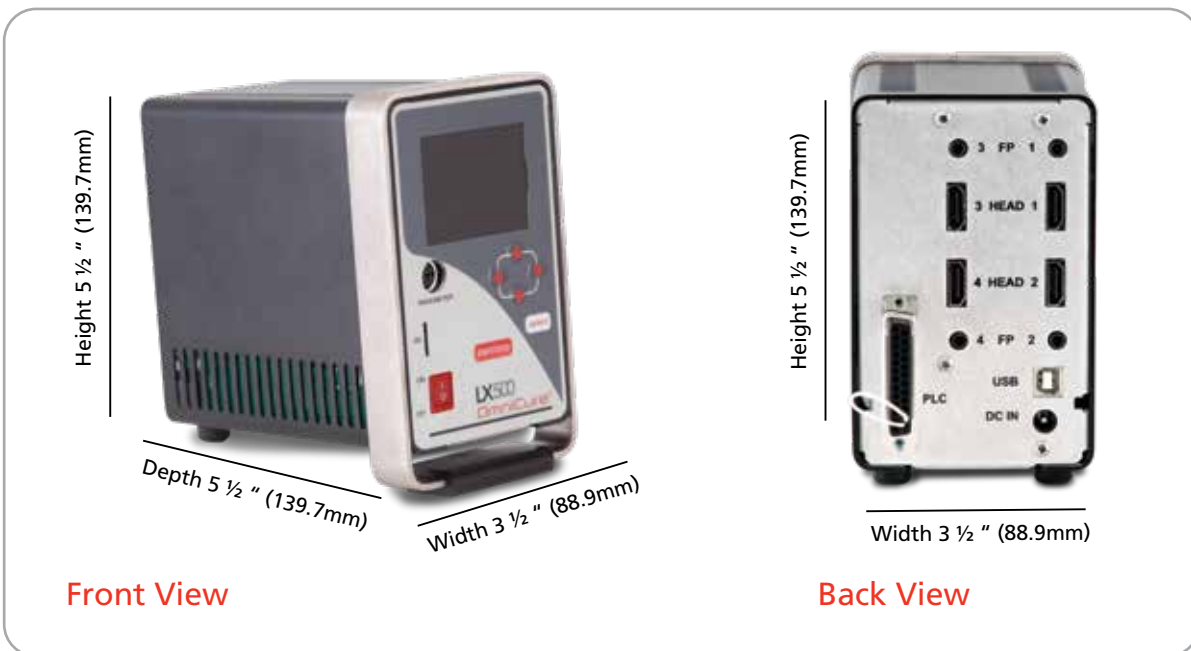
| Profile | # | Time | Level | Dwell | Src |
|---------|---|------|-------|-------|------|
| 1 | 1 | 1.5 | 75 | 0.1 | PLC1 |
| 2 | 1 | 5.0 | 100 | 1.5 | PLC1 |
| 3 | 1 | 2.0 | 50 | 6.5 | PLC1 |

| Technical Specification | |
|--|--|
| UV LED Heads | 1 to 4 individual & interchangeable to any channel. |
| 2.4" Full Color Displays | Main Control, Input Configurations, System Maintenance, LED Information, Calibration, Mirco SD Log Information. |
| Mode Control | 4 Way membrane control for system display and programming. |
| Timer | Countdown Mode: Range programmable from 999.9s to 0.1s, in 0.1s intervals. Count Up Mode: User control timing via the front panel or foot pedals. |
| Intensity Level | 5%-100% (with 1% increments) |
| Start/Stop | Control start or stop of the LED emission. |
| Power On/Off | Separate power on/off controller. |
| Alarms | Alarm icon will appear on screen in the event of an error or fault. |
| Controller Dimensions | (H) 5.5", (W) 3.5", (D) 5.5" |
| External Control Description | Via optional foot pedal, PLC, or PC through USB communication. |
| Operating Conditions | |
| Operating Voltage | Controller Supply Input: 12 VDC Input to AC adaptor: 100-120VAC or 200-240VAC (+/-10%) & 50/60Hz. |
| Power Consumption | 72W max at 120VAC 104W max at 240VAC (with 4 UV LED heads in operation) |
| Ambient Temperature/ Humidity Range | 5° to 35°C, 85% max. (no condensation) |
| Storage Temperature/ Humidity Range | -10° to 60°C, 85% max. (no condensation) |
| Certifications & Safety Standards | RoHS compliant and meets CE requirements |
| Warranty | 1 year |

Energy Comparison



| Part Number | OmniCure LX Series Controller |
|-------------|---------------------------------------|
| 010-00520R | OmniCure LX500 Controller - 2 Channel |
| 010-00521R | OmniCure LX500 Controller - 4 Channel |



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