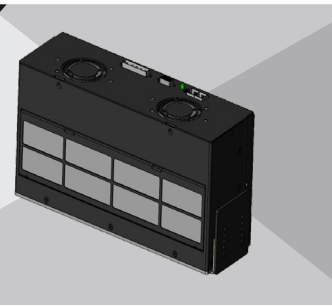
excelitas® | OmniCure®

OmniCure® AC7+ Series Large Area UV LED Curing Systems

Quick Start Guide



Setup/Unpack

The OmniCure® AC7+ Series air-cooled, LED curing systems allow for fast, even curing by providing high peak irradiance at long working distances with extended clearance from conveyed parts. The customized optics offer maximum flexibility in focusing the light at specific working distances and easily adapts to specific UV process needs.

- Carefully unpack the unit and accessories from the shipping carton.
- When removing the LED Head, ensure the optical window is not placed directly on a surface to avoid damage.

WARNING: Refer the following documents prior to use.

Safety Precautions Booklet (035-00636R)

User Guide (035-00772R)

System Requirements

In addition to the UV LED Head, you will require the following components:

- Power supply
- Power cable

You will also require a PLC controller unless you are using an existing controller. These may be sourced separately or may be purchased from Excelitas®.

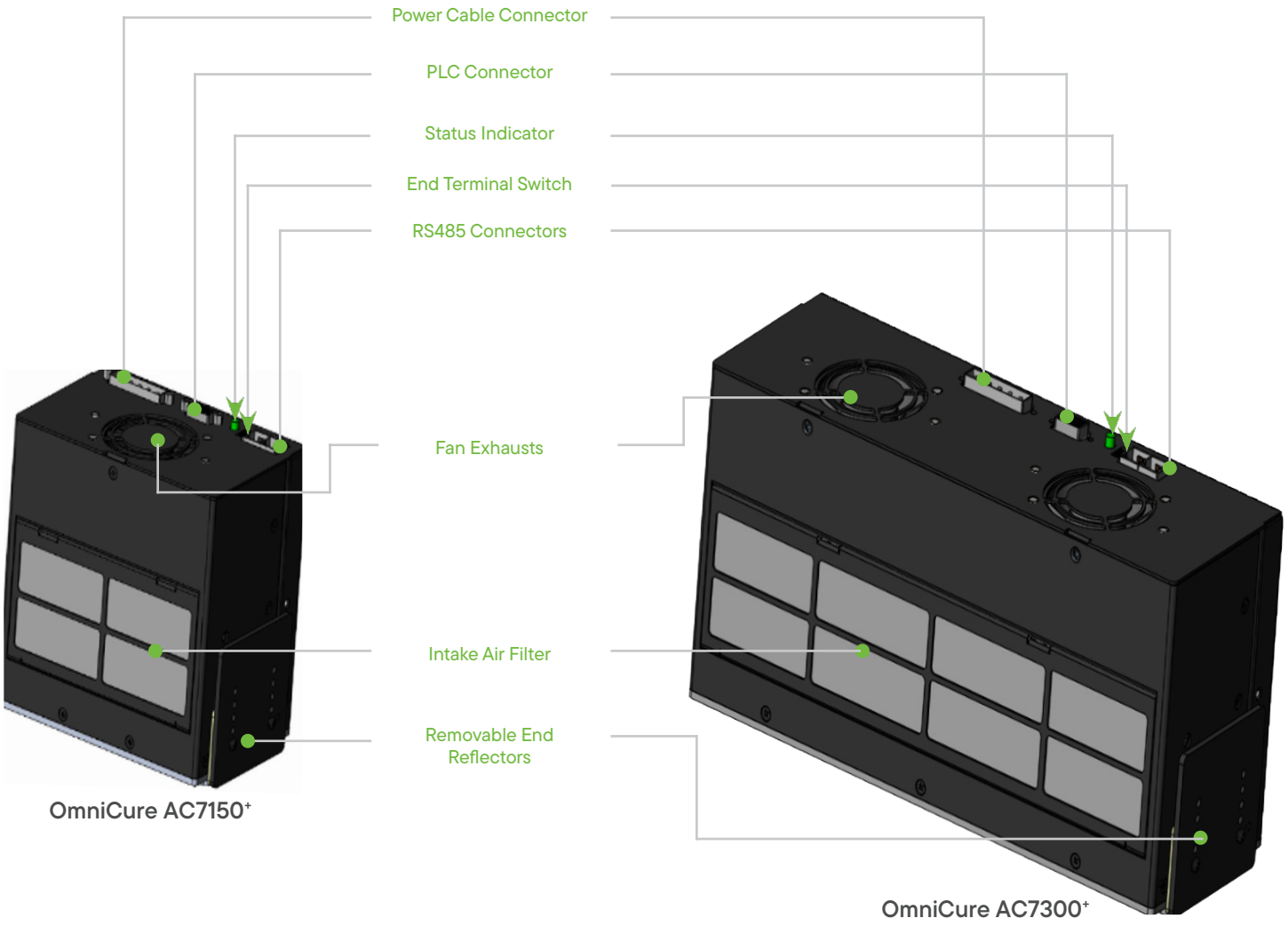
Connecting the Power Supply and PLC Controller

Note: All connectors are via screw style fasteners—do not over tighten the connector screws.

Note: The following is a generic procedure, illustrated with the common components described above. Please refer to specific documentation related to your power supply and controller.

Tip: After securing the power cable to the power supply, it is recommended to "tie-off" the female connector cable on to the mounting brackets or process rigging as a form of strain relief.

1. Attach the male end of the power cable to the power supply unit, and connect the female end of the power cable to the UV LED Head.
2. Attach the male end of the PLC cable to the UV LED Head (see figure below).
3. Make sure the power supply unit is turned off.
4. If using an Excelitas PLC Controller connect the PLC loop-back connector to the PLC pass-through port.



UV LED Head Connections Ports

Powering Up and Powering Down

1. Ensure that the AC7+ system has been properly installed and the UV LED Head is securely mounted with the optical window in the desired orientation.
2. Verify that the power supply unit AC supply cord is connected to a properly grounded AC outlet.

3. If the power supply has a circuit breaker, switch it to the “ON” position.
4. Turn the main power switch of the power supply to the “ON” position and check the fan for airflow.
5. The LED indicator on the UV LED Head will ***flash*** green during “boot-up” and change to a ***steady*** green indicating UV LED Head is ready for use. It is recommended to wait for 1 minute from “cold state” to “ready state” before applying UV power to the Head. After turning on UV power, the system will reach a fully stable operating temperature in 2-3 minutes.



CAUTION: The UV LED Head can become very hot. Avoid handling until the UV LED Head has cooled down (approx. 5 min) or use protective gloves.

Using the LED Head

The peak wavelength of the UV LED Head is 365 or 395 nm ± 5 nm, depending on model. For all models, adjusting the UV LED Head intensity can be actuated by an external controller via the PLC interface. Refer to Section “Pin-Outs”. Input voltage vs. desired intensity; 5V = 100% and 1V = 20%. A minimum voltage of 1V is required for light source operation.

Note: The light source will maintain a 20% intensity when the input voltage is in the range of ~0.5 - 1V. If the input voltage is below this, the light source will turn off.

Ensure the UV LED Head indicator is illuminated to a ***steady*** green before applying UV power to the Head.

The UV LED Head indicator will illuminate to a ***steady*** amber indicating UV is on. When UV is off, the indicator will revert back to a ***steady*** green indicating UV is off.

The UV LED Head is capable of responding to PLC control signals in less than 0.2 seconds.

Understanding the LED Indicators



WARNING: Never look at operating LED! The light could severely damage the cornea and retina of the eye if the light is observed directly. Eye shielding must be used at all times as well as clothing to protect exposed skin. Refer to user guide for more details.

LED INDICATORS	
Steady **Green**	System Ready; no critical faults
Steady **Amber**	UV LED turned ON
Steady **Red (~1x/Second)**	Critical fault • Temperature Fault • LED Fault • System Error
Slow-flashing **Green (~1x/second)**	POST and Initialization Input voltage is less than 46V or greater than 50V Unit is still functional
Slow-flashing **Red**	Input voltage is less than 46V or greater than 50V
Slow-flashing **Amber**	Unit is still functional
Fast-flashing **Green**	Warranty status—operating hours is < 9000
Fast-flashing **Amber**	Warranty status—operating hours = between 9,000 and 10,0000
Fast-flashing **Red**	Warranty status - operating hours is >10,000

Symptoms and Possible Causes

If the system fails to power up:

- Make sure the AC power cord is securely plugged into a functional AC outlet and into the AC inlet on the power supply unit.
- Make sure that the circuit breaker on the power supply unit is not tripped. If so, reset breaker.
- Make sure all cable connections (power supply to UV LED Head) are secure.
- Ensure that the power supply is switched on and the green LED indicator on the front panel is lit.
- Make sure the door lock electrical loopback on the PLC is installed properly.

If the system powers up but experiences a thermal fault during operation:

- Ensure UV Head is installed with adequate clearance around intake and exhaust ports.
- Ensure intake air filter is not clogged or obstructed.
- If filter is clogged, either clean with compressed air or replace it with a new filter insert.

If the system powers up but does not emit UV:

- Check that the door lock loop is intact.
- Ensure that the voltage levels on pins 2 and 3 of the PLC interface match the logic required to enable the LEDs.
- Check the visual indicator for signs of a fault.

If a fault condition has been detected:

- Attempt to clear the fault by toggling the voltage high on pin 14 of the PLC interface or by pressing the “Clear Fault” button on the PLC controller.

If the system exhibits a fault condition with a *slow-flashing* red:

- Power-cycle the UV Head to clear.

If the light intensity is too low:

- Make sure the input voltage is at least 46V (input voltage to the Head for the purposes of powering the head is typically 48V (46-50V DC)).
- Out-of-range input voltage will be indicated on the visible indicator on the UV LED Head with a ***slow-flashing*** green.
- Clean the optical window of the UV LED Head as described in Section, “Cleaning the LED Head”.
- Verify that the intensity level of the UV LED Head is set to the correct level using the PLC Controller.

If problems persist beyond these troubleshooting points, please contact Excelitas Service Department (refer to Section, “Contact Information”).

REGULATORY (refer to user guide for complete details)

Product Safety and Electromagnetic Compatibility

The OmniCure AC7⁺ Series has been tested and found to comply with product safety and electromagnetic compatibility requirements. For a complete list of tests and for certification details, please contact your OmniCure representative or visit:

http://www.excelitas.com/Pages/Product/OmniCure.aspx

Council Directive 2014/35/EU	Low Voltage Directive	CE
Council Directive 2014/30/EU	EMC Directive	
Council Directive 2012/19/EU as amended by (EU) 2024/884	WEEE Directive	
Council Directive 2011/65/EU as amended by (EU) 2015/863	RoHS Directive	
Council Regulation (EU) 2023/1542	Batteries Regulation	



China RoHS



RoHS



WEEE Directive

CE Markings

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