

Ultra High Power UV Curing System

(world's highest optical power density 365nm LED, continuous operation)



DATASHEET



This UV LED spotlight burns paper with an output power density exceeding legacy mercury UV lamps. It is the most powerful device on the market. The design leverages multi-year military UV gear developments, realizing a ruggedized manufacturing tool for the mass market. The 365nm UV light features fast/deep epoxy curing, continuous long operation, homogeneity illumination, compact size, ease of use, and longevity. The hand-held UV light can be switched on/off by a finger-press button switch or a foot pedal. It has a timer with a display. The spot size is adjustable from a diameter of 4mm to 50 mm. The standard version adjusts the illumination power by changing the size of the spots with a holder as an accessory. A computer controller is also available that sets both the timer and power via a USB/GUI. We produce optical power meters that fit the head size to accurately measure the power level.

Do not look at the UV light as it can harm your eye. We offer several eye protection accessories, including glasses, UV head mount shield, and large transparent plate shields.

Applications

- UV adhesive cure
- UV coating

Features

- Long Operation
- High Power
- Uniform
- Compact
- Low Cost

Specifications

Parameter	Description	Unit
Wavelength	235, 255, 280, 365±5, 405, 440	nm
Optical Power Density (4mm spot)	2.5 – 5.5 *	W/cm ²
Optical Power Density (25mm spot)	100-150 *	mW/cm ²
LED Electrical Power	14	W
Cure Time Range	10 seconds to 60 minutes	
UV Spot Size	Φ4 to 50	mm
Working Distance	20 to 150	mm
Cooling Method	air blowing	
Operation Life	> 25 000	hours

* For wavelength above 365nm.

For wavelengths shorter than 365nm, we use the best LED available.

Electrical Specifications

Component	Parameter	Unit
Power supply	AC 100 ~ 240	V
Fuse	1	A

Rev 01/30/23

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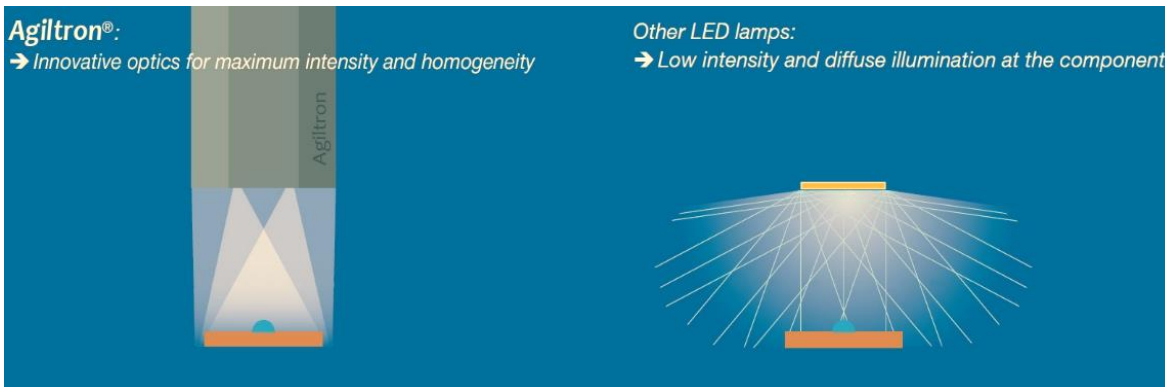
Mechanical Footprint Dimensions (mm)

Component	Dimensions	Unit
UV cure head	Ø30 x 142	mm
Driver	170 W x 180 D x 65 H	mm



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Advanced Features



❑ Optical Lens System For Maximum Intensity and Homogeneity

The special LED and lens system delivery high UV light intensity that burns paper (no competitor can achieve). The optics also enables homogeneity over the entire irradiation area as illustrated above.

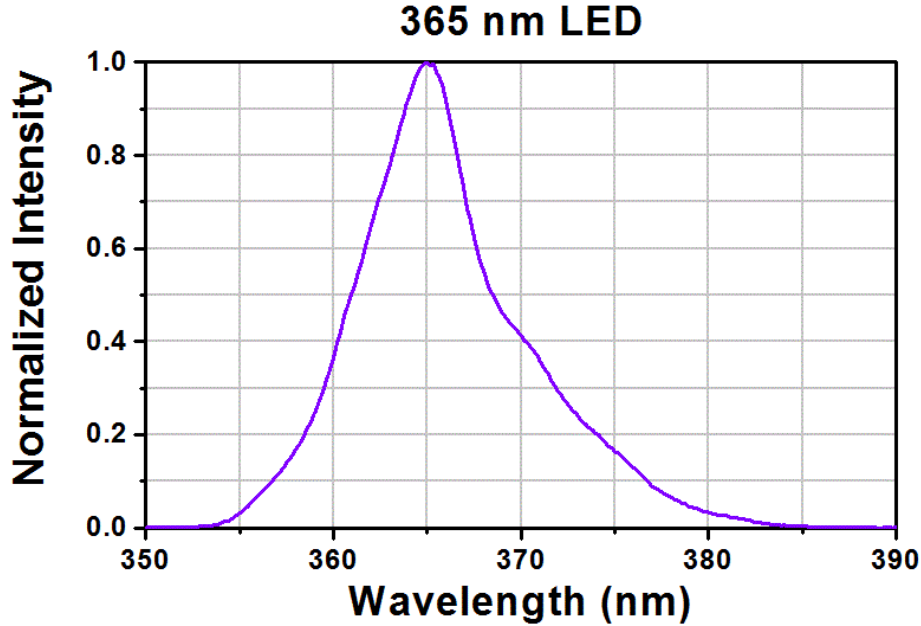
❑ Cooled LED For Constant Light Intensity and Long Lifetime.

For constant light intensity and long lifetime, high power LED modules require temperature cooling. With integrated fan and special heat sinks, our spot light can operate continuously for a day without intensity change.

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Emission Spectrum



Ordering Information

	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prefix	Controller*	Head**	Head Holder	Head Shield	Power Calibration	Configuration	Google	Foot Switch***
SUVA-	One Head = 01 Four Head = 03 Non = NN	365 nm = 1 265 nm = 2 280 nm * = 3 405 nm = 4 440 nm = 5 255 nm = 6 232 nm = 7 480 nm = 8 495 nm = 9 Non = N	Non = N Yes = 2	Non = N Yes = 2	None = N Yes = 2	Box+Head = 1 Box Only = 2 Head Only = 3 Special = 0	None = N One = 1 Two = 2 Three = 4	No = N Standard = 1 Dual = 3 Quart = 4

* Four Head Controller has USB/GUI computer interface, <https://agiltron.com/product/4-head-solid-state-uv-spot-light/>

** Wavelength <365nm uses a LED with the highest optical power available but may not meet the spec

*** Dual control two

Red: Special order that is more expensive due to the lack of volume

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General Safety Statement

UV light is harmful to the eye and skin. Since sunlight contains UV, the effect is well studied. Do not look at the UV light directly. For the spotlight, the power density is concentrated at the focus spot, which quickly reduces at the position away from the focus point.

Questions and Answers

Q: What is the best wavelength I should choose if my epoxies have a wide range of curing wavelengths?

A: All epoxies can be cured at a shorter wavelength since these UV lights are more energetic and provide better and deeper curing. However, not all epoxies can be cured at a longer wavelength that requires a special formulation to be cured thoroughly.

Q: If I want to cure a UV epoxy through a piece of transparent plastic, what wavelength head should I choose?

A: Transparent plastic blocks 365nm UV light. Therefore one needs to choose an epoxy that can be cured at 450nm and choose the matching head.

Q: Is the UV head output power calibrated?

A: The output power of each UV head is tested to meet the range stated on the datasheet. Since the output power of each UV head is highly sensitive to the actual sample position, we recommend customer to calibrate the power density using a power meter in place of the sample. The power can be changed by adjusting the UV head position using our holder or by setting it in the four-head control box.