

# Solid State LED Light Excitation Subsystems

## SOLA II SERIES LIGHT ENGINES



SOLA SM II Light Engine with LLG

### SOLA II Series Advantages

- High Intensity
- Quiet and Clean Operation
- LLG Interlock Safety Feature
- Low Power Consumption
- Reduced Footprint
- Mercury Free
- Robust for Harsh Environments
- Lifetime: > 20,000 hrs



The SOLA II Series Light Engines are solid state, white light excitation subsystems for stable, robust, high-intensity illumination. They offer microscopists and the life sciences an arc lamp replacement with long lifetimes. The SOLA II Series light engines produce white light in the form of continuous spectral output from 380 to 680 nm and are suitable for imaging all the most common fluorophores and fluorescent proteins.

The SOLA II Series Light Engines exceed lamp performance in the form of powerful, cool, stable, robust, UV- and IR-free light production and allows the user simple integration with existing filter cubes and hardware configurations. This additional flexibility provides individual users, core facilities and OEMs a superior excitation subsystem. Lifetime is greater than 20,000 hours.

The SOLA II Series Light Engines are Mercury Free and help reduce the footprint on the environment.

### Need for Mercury Free Lighting

The mercury arc lamp has long been used as a fluorescent microscope light source because of the bright spectral bands available within the visible wavelengths. Almost every new research or clinical grade fluorescent microscope is equipped with a mercury arc lamp. However, mercury arc lamps are hazardous, consume a lot of energy, have a high cost of ownership and are unreliable.

Ozone-free Xenon sources have no mercury, reducing the amount of hazardous waste, but they perform at a lower intensity. Solid-state technologies like LED illumination have the potential to solve all the concerns associated with the use of mercury, but LEDs alone have yet to achieve the brightness needed for microscopy.

Thus, the use of mercury lamps has remained a necessary and wide-spread source of mercury in research laboratories for decades. SOLA II has overcome the frustration associated with this dependence on mercury and has revolutionized solid-state technology with Light Engines capable of replicating and exceeding the spectral properties of the mercury arc lamp. In so doing, SOLA II has obviated the toxic disadvantages previously associated with microscopy. Light Engines allow scientists to utilize high-performance, solid-state, sustainable lighting solutions in clean, safe laboratories using mercury free microscopes.

# SOLA II Series Light Engines

## Specifications

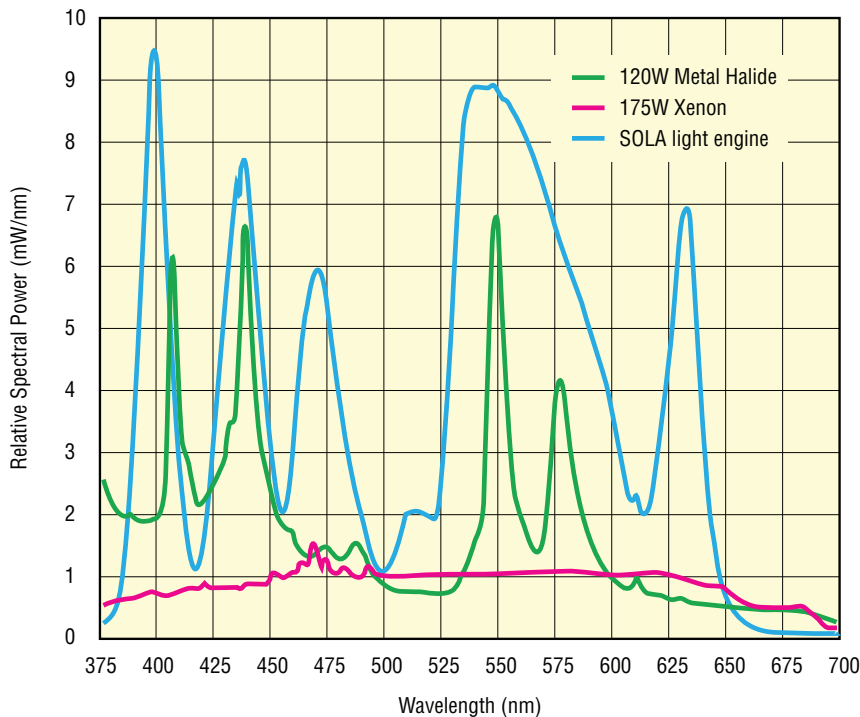
	SOLA-SM-II	SOLA-SE-II
Power <sup>1</sup>	2.5 W	2.5 W
Intensity	30-40 W/cm <sup>2</sup>	30-40 W/cm <sup>2</sup>
Intensity Adjustment	No	Yes
Electronic Controllability	Manual On/Off <sup>2</sup>	Full electronic control via USB <sup>3</sup>
Spectral Range	380 - 680 nm	380 - 680 nm
Warm-up time	1 sec	1 sec
Source	Multiple solid state sources operating simultaneously	Multiple solid state sources operating simultaneously
Weight	3.6 kg	3.6 kg
Dimensions, l x w x h	26.3 cm x 12.5 cm x 16.3 cm	26.3 cm x 12.5 cm x 16.3 cm
Power Requirements	120 W, 24 VDC, 5A	120 W, 24 VDC, 5A
CE Compliant	Yes	Yes

<sup>1</sup> Power out of the LLG

<sup>2</sup> SOLA-SM-II can be turned On/Off with Foot Pedal Accessory

<sup>3</sup> Software Drivers available as well as Preloaded Control Tablet

## Relative Spectral Power Comparison



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 all been certified compliant with ISO 9001 by the British Standards Institution.

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