

Image by TissueGnostics

## Power and Control

### 21st Century Illumination for 21st Century Microscopy

Lumencor's new family of SOLA Light Engines are now the market leaders in modern solid-state illumination for microscopy and other life science applications. Why tolerate the limitations of an archaic arc lamp on your microscope when such a reliable and technically superior replacement is within reach? Eight years after its introduction, and with thousands of Light Engines in service, Lumencor has further enhanced the SOLA Light Engine product line with the addition of active light output stabilization, fully linear intensity control and electronic control interfaces on all models.

The four SOLA Light Engine models are primarily distinguished by spectral distribution differences in their light output. The SOLA Light Engine provides white light output for excitation of DAPI, GFP/FITC, YFP, Cy3, mCherry, Cy5 and spectrally similar fluorophores. In the SOLA FISH Light Engine, output in the 475–600 nm region is red-shifted to provide optimal excitation for SpectrumGreen™, SpectrumRed™ and other fluorophores commonly used for fluorescence in situ hybridization (FISH) analysis in cytogenetic testing laboratories. The SOLA V-nIR and U-nIR Light Engines offer the broadest spectral coverage, including near infrared (nIR) output for excitation of fluorophores such as Cy7 and ICG, and for other applications that benefit from the enhanced tissue penetration of nIR light.

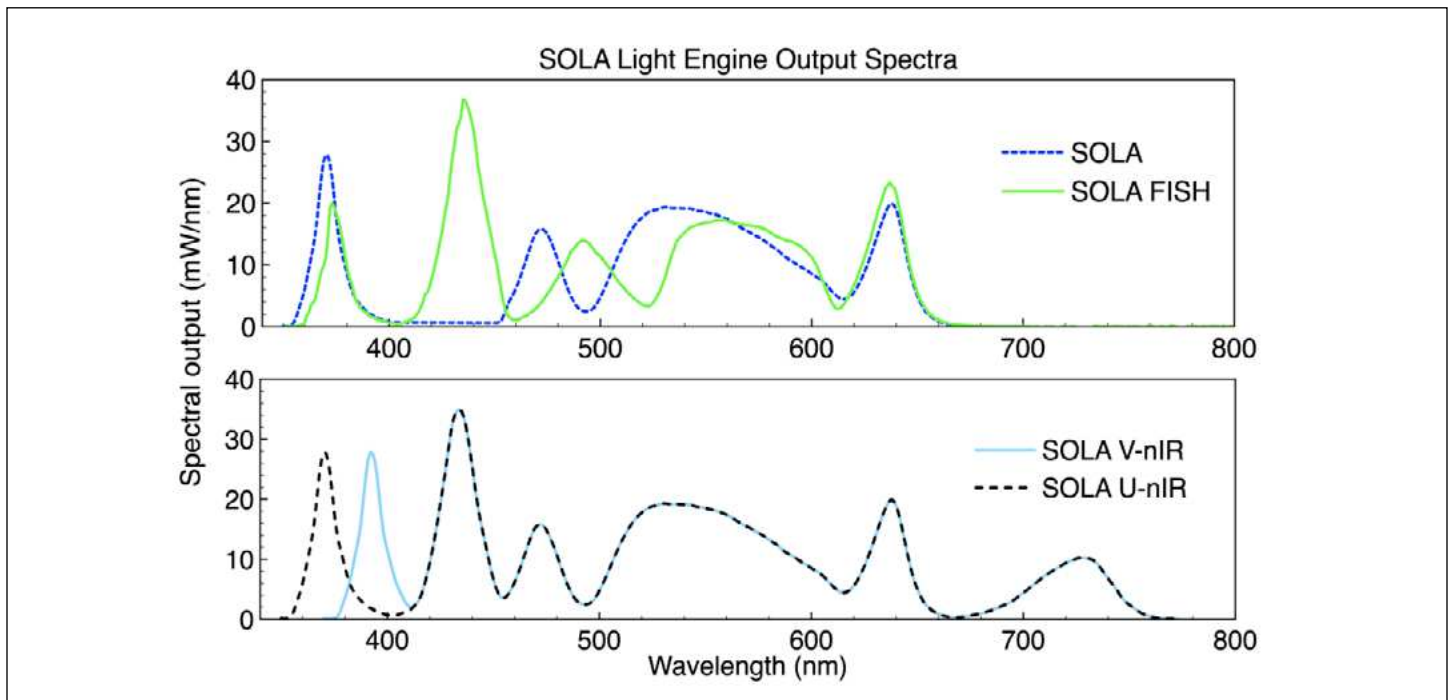
SOLA Light Engines are easy to operate. Warmup is essentially instantaneous, with stabilized output achieved within 1 second of a manual or electronic ON command. So light output can be turned on only when it is needed for data acquisition. The hours of unproductive idle time required to maintain arc lamp output stability are eliminated, together with the operating costs of routine bulb and light guide replacement and disposal.

All SOLA Light Engine models now provide both manual and electronic control of light output on/off status. All models also provide electronically controlled linear output intensity adjustment. The user interfaces for these controls are an optional control pod accessory or one of several supporting software packages on a USB-connected computer. The capability for electronic attenuation of the light output is particularly valuable for applications involving photosensitive live specimens.

SOLA Light Engines contain no parts requiring replacement or alignment, need no routine maintenance and have a typical working lifetime of ten years, far exceeding that of any lamp. All SOLA Light Engines are mercury-free and RoHS compliant.

As with all Lumencor products, OEM customization is available upon request.

For more information on the SOLA Light Engine, please contact us at [info@lumencor.com](mailto:info@lumencor.com). To receive a purchase quotation for a SOLA Light Engine, please submit our online quotation request form.



## Features and Operating Characteristics:

Features	Details
Sources	4, 5 or 6 solid-state sources operating simultaneously to produce white light
Wavelengths	360–680 nm with violet and near-IR options
Output Power	~3 W (SOLA). ~3.5W (SOLA FISH.) -4 W (SOLA U-nIR and SOLA V-nIR) [1]
Power Stabilization	Onboard photodetector and feedback system for active output power stabilization
Light Delivery	Built-in output adapter for 3 mm diameter liquid light guide (LLG) with safety interlock. LLG (2 m length) included with all orders
Manual Control	Light output switch (front panel) and plug for foot pedal accessory (rear panel)
Electronic Control	Light output on/off and linear intensity control (0-100%, 1% increments [2]) via USB serial connection [3]. Electronic shutter via TTL input to rear panel BNC
Control Pod	Optional control pod (83-10007) connects to the Light Engine USB port and controls output on/off and intensity settings
Power Requirements	120 W, 24 VDC, 5 A. Power supply and cord included with all orders
Warranty	24 months
Dimensions (W x L x H)	12.5 cm x 26.3 cm x 16.3 cm
Weight	3.6 kg

Notes [1] White light output at distal end of 3 mm diameter LLG. [2] Recommend operating range 5–100%. [3] USB connection cable included with all SOLA Light Engines.