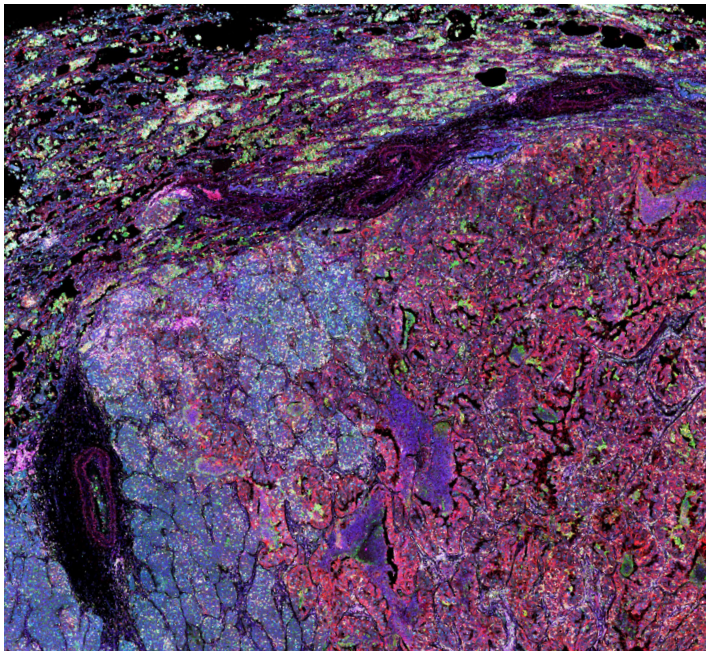


Image by Abdul Mohammed

NEW SPECTRA X is even Brighter & Spectrally Broader, retaining Filter Flexibility

With more than a decade of proven performance, Lumencor's SPECTRA X Light Engine is a 1st choice illuminator for researchers worldwide. Fluorescence microscopists value both brightness and spectral flexibility. Exchangeable filters allow for all the freedom of a breadboard excitation subsystem in a compact, easy-to-use box.

This updated 2023 SPECTRA X has a lot to offer. Improvements include:

- Solid-state sources tuned to enhance efficient fluorophore excitation
- Near-infrared wavelengths (Cy7 excitation) as a standard output
- Enhanced optical power over its predecessor
- Onboard microprocessor with easy-to-use GUI
- Linear optical output power control

What remains the same are SPECTRA X's user-exchangeable bandpass filters in a compact, turnkey illuminator. Spectral output can readily be adjusted to meet experimental requirements. This feature is even more useful due to the broader spectral range now available for selection. Stability and reproducibility are also preserved. Access to the exchangeable filters occurs via a hinged cover on one side of the Light Engine.

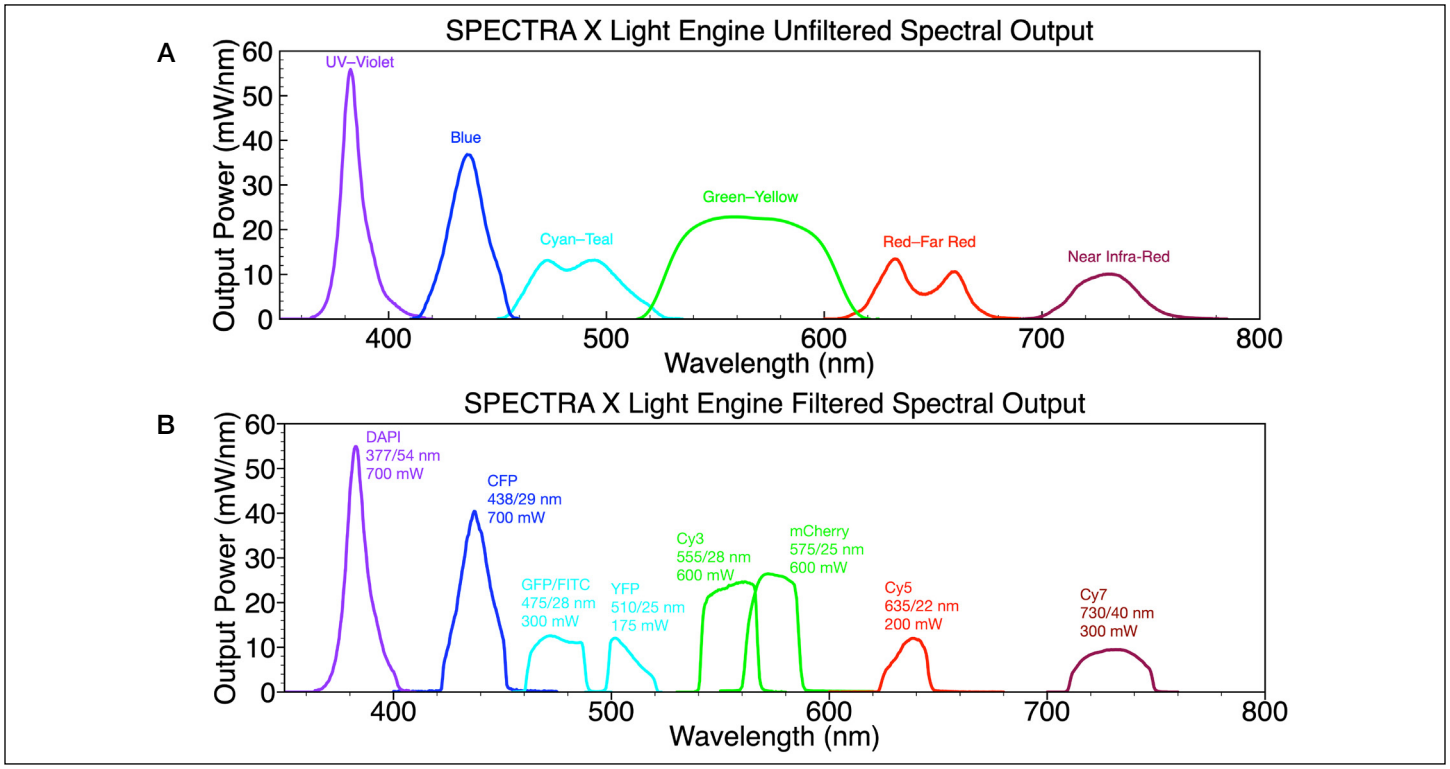
After passing through the user-selected bandpass filters, the constituent light source outputs merge into a common optical train, directed to the output port on the front panel. A safety-interlocked adapter connects the optical output of a 3 mm diameter liquid light guide (LLG) to any standard microscope or other bioanalytical equipment, while ensuring user safety.

The SPECTRA X's control microprocessor affords industry-leading performance metrology:

- Real-time, linear optical power
- Illuminator on-time
- Individual on-time for each light source
- Internal operating temperature
- Real-time DC power consumption
- Interlock Status

In addition to the onboard control GUI, SPECTRA X control can be implemented in several imaging software packages. TTL triggers for all sources afford fast (<100 microseconds) on/off timing.

For more SPECTRA X Light Engine information contact info@lumencor.com or submit an online quotation request form.



Features and Operating Characteristics:

Features	Details
Light Sources	Six independently-controlled solid-state sources
Wavelength Range	360–780 nm. Unfiltered output spectra shown in panel A above
Filters	Spectral output refined by user-exchangeable 25 mm-diameter bandpass filters [1,2]
Output Power	Typically 100–700 mW at the distal end of 3 mm diameter liquid light guide, as a function of bandpass wavelength and width
Light Delivery	Built-in output adapter for 3 mm diameter liquid light guide (LLG) with safety interlock; LLG not included with Light Engine purchase
Safety Interlocks	Light output contingent on mechanical (key) and electronic interlocks
Control Software	Onboard GUI or PC-based image acquisition software
Control Interfaces	Source selection, light output on/off and intensity via serial interface (RS-232/USB or TCP). Source selection and light output on/off via TTL
Intensity Control	5–100% linear control for each source, independently [3]
Optional Accessories	9-channel breakout cable for TTL triggering; Light Engine control pod [4]
Power Requirements	100–240 V AC, 50–60 Hz. DC power supply (220 W, 24 V/9.2 A) and AC cord included
Warranty	24 months
Dimensions (W x L x H)	145 mm x 340 mm x 203 mm (5.7 in x 13.4 in x 8.0 in)
Weight	8.7kg /19.1 lbs

Notes:
[1] Filters are specified in Panel B (above) as CWL/BW where CWL is center wavelength of the transmission window and BW is bandwidth at 50% transmission, in nanometers. [2] A spare, empty filter holder is provided with each Light Engine. Additional filter specifications are listed in the SPECTRA X operations manual. [3] 0–5% power is not recommended. [4] Control pod connects to Light Engine USB port and controls source selection, light output on/off and intensity settings.