lumencor®

light engines for a

BRIGHTER. GREENER. PLANET.

LIGHT **BYTES:** May 2016

Better Red Than Dead...

In addition to savings of $500–$1,000 per year in operating and maintenance costs, another major benefit of Lumencor's SOLA light engines® over metal halide lamps is their superior output in the red region (>620 nm) of the visible spectrum. Images of *selaginella* autofluorescence, excited from 617–645 nm and detected under identical conditions, illustrate the improved image data quality delivered by the SOLA light engine. Excitation at >620 nm provides advantages in terms of greater sample transparency, less generation of phototoxic reactive oxygen species and lower background signals compared to excitation at shorter wavelengths. Many red-excited fluorophores including Cy5, Alexa Fluor 647, ATTO 647N TO-PRO-3 and DRAQ5 have been developed to allow exploitation of these advantages.

Give your microscope a SOLA upgrade today and look forward to brighter days ahead!

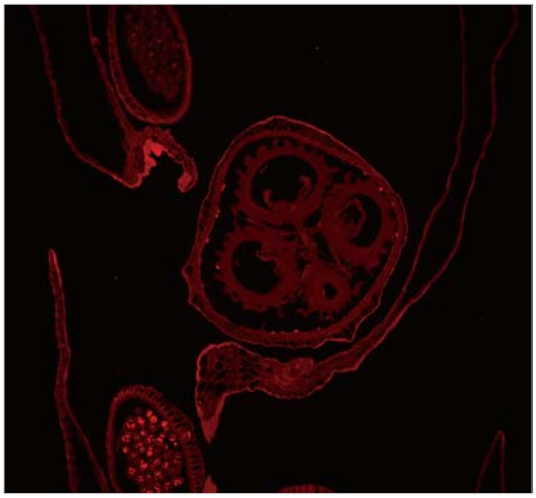


FIGURE A
- SOLA SE Light Engine
- 50% maximum output

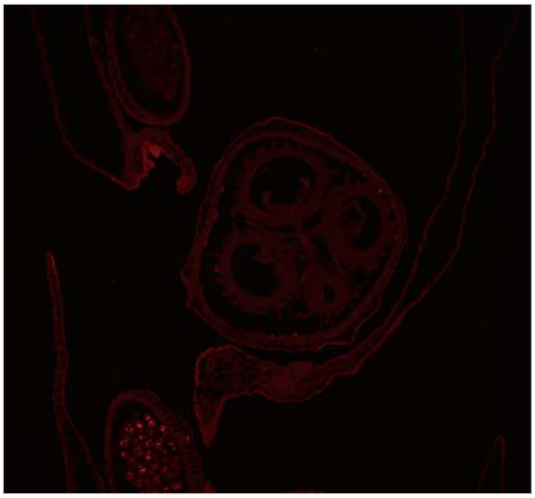
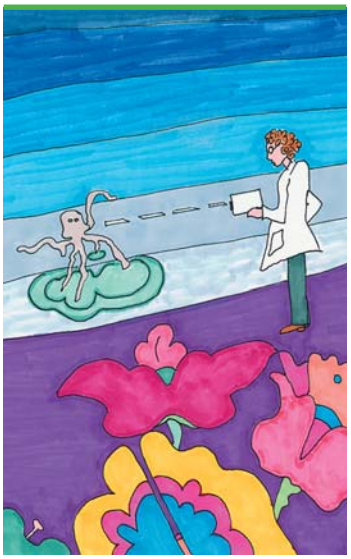


FIGURE B
- 120 W Metal Halide
- 100% maximum output

Be sure to visit our site **lumencor.com** and **blog** for more information about Lumencor products and applications.



TECHNICAL DETAILS
- Single band exciter 631/28 (CWL/FWHM). Semrock FF660-Di02 dichroic and FF01-692/40 emitter
- Nikon Ti microscope, 10X, 0.5 NA objective, Andor Zyla 5.5 camera, 50 ms exposures.
- Power output at sample plane (10X, 0.5 NA objective) SOLA SE (100%) = 94 mW. 120 W metal halide (100 %) = 27 mW.
- Sample: Autofluorescent longitudinal section of a strobilus from selaginella (heterosporous clubmoss).