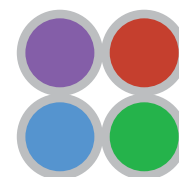


ZIVA light engine[®]

A Brilliant Solution for Super-Resolution



lumencor[®]



Compact Array of Seven Solid-State Laser Light Sources

For structured illumination (SIM) and other super-resolution imaging techniques

The next generation of solid-state illumination is here. In Lumencor's ZIVA light engine, seven individually addressable multimode laser light sources join forces with advanced electronic control systems to deliver unprecedented output power and performance.

The ZIVA light engines multimode laser array is optimized for coupling into narrow bore optical fibers and delivers approximately 100 mW of output power at the distal end of a 100 μm optical fiber from each laser line. The laser outputs are refined by bandpass filters and merged into a common optical train directed to the light output port on the front panel. The light output port has a built-in adapter for connection to microscopes and other bioanalytical instruments through a SMA- terminated optical fiber. All these capabilities are assembled in a compact bench top device with a 15 cm x 35 cm footprint.

The ZIVA features an advanced control system based around an onboard computer with an embedded command library. These commands give access not only to the basic control functions of light source selection, on/off switching and output intensity adjustment, but also to an extensive panel of operating status

reports and preference settings. A GUI resident on the onboard computer and viewed using a web browser via a LAN connection provides convenient access to many of the command library functions. ZIVA controls are also implemented in several image acquisition software packages. TTL trigger inputs are provided for all seven output lines for applications requiring fast (100 microseconds) switching. Long-term power stability can be sustained by an active stabilization. An onboard photodiode continuously monitors the light output and generates a reference signal that is applied to the constituent sources in a feedback loop to maintain constant light output over time.

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

For more information on the ZIVA light engine please contact us at info@lumencor.com. To receive a purchase quotation for a ZIVA light engine, please submit our [online quotation request form](#).

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405

446

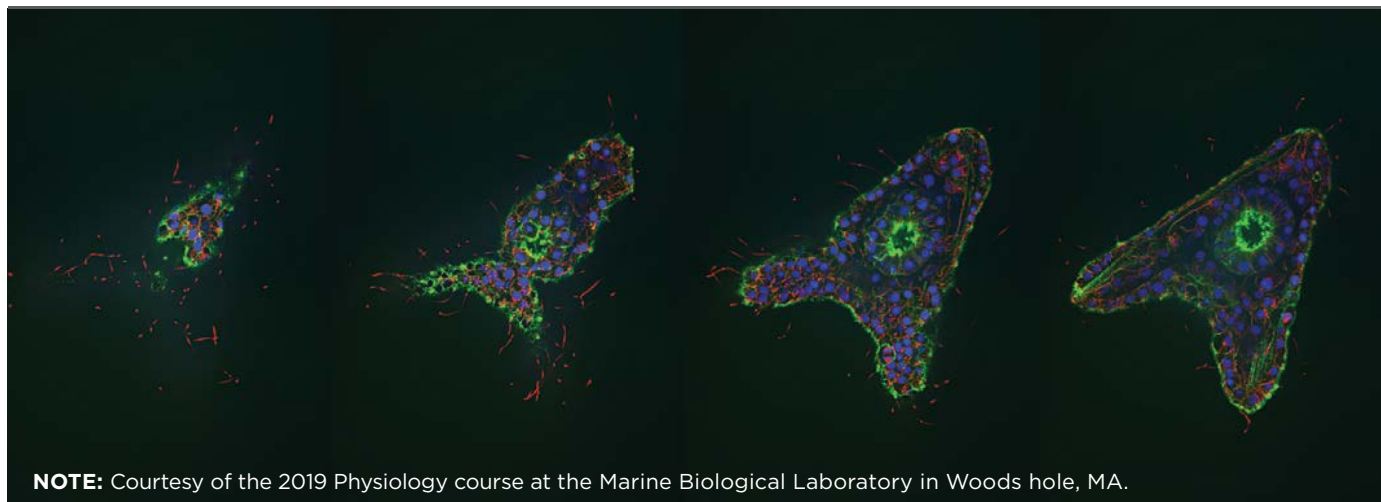
477

520

546

638

749



NOTE: Courtesy of the 2019 Physiology course at the Marine Biological Laboratory in Woods hole, MA.

Features and Operating Characteristics:

Features	Details
Sources	7 class 4 multimode laser sources
Wavelengths	Nominal center wavelengths 405, 446, 477, 520, 546, 638, 749 ± 2 nm
Bandpass Filters	Integrally installed bandpass filters for spectral output refinement
Output Power	-100 mW per laser line at distal end of 100 µm dia. optical fiber
Light Delivery	FC/PC terminated fiber
Safety Interlocks	Laser output contingent on manual (key) and remote (electronic) interlocks
Operational Control	Onboard computer with server/client architecture and embedded command library
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
Software	Onboard GUI or PC-based image acquisition software
Power Requirements	220 W (24V DC/9.2A) power supply included
Warranty	18 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	8.7 kg /19.1 lbs
Optional Accessories	9-channel breakout cable for TTL triggering. Light engine control pod ^[1]

[1] Control pod connects to light engine USB port and controls source selection, light output on/off and intensity settings.

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