

LIDA Light Engine

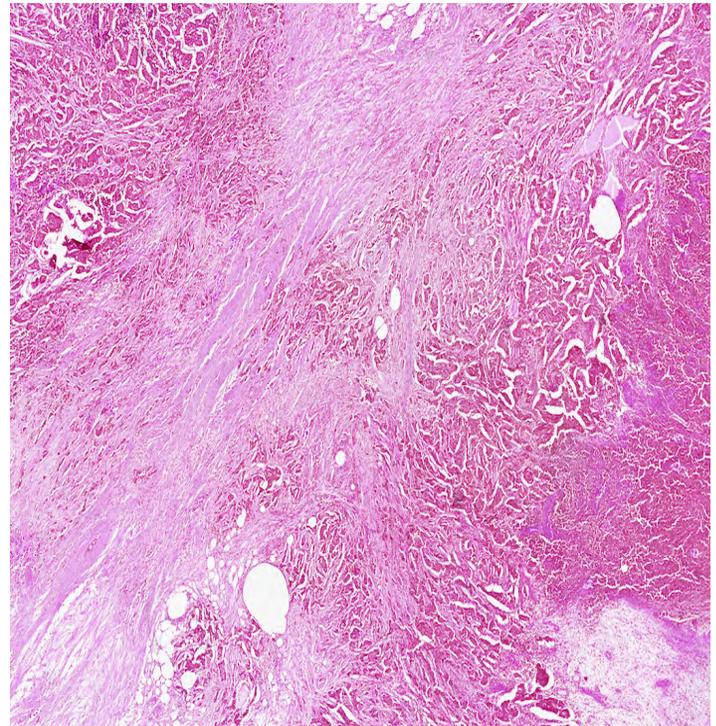


Image by Michael Weber, Harvard Medical School

Discrete, camera synchronized RGB illumination

High-Speed Color Transmitted Light Microscopy with Monochrome Cameras

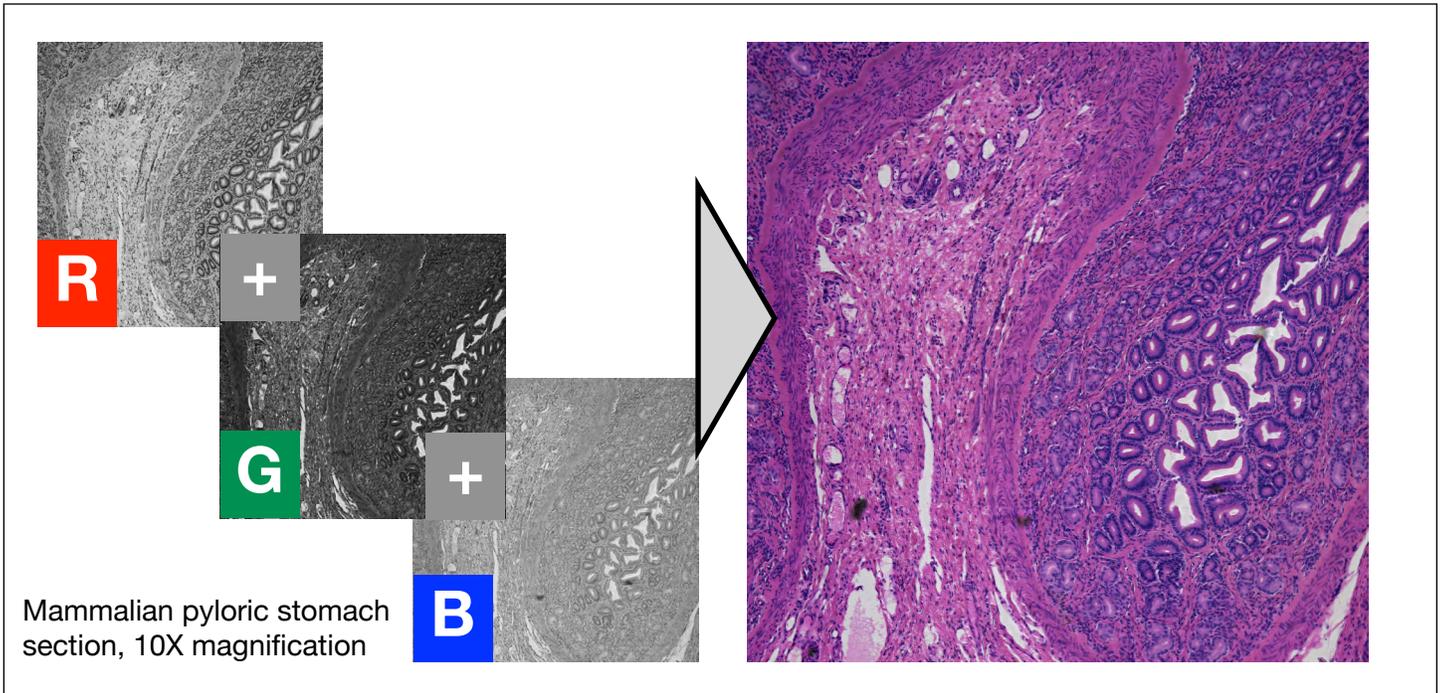
The LIDA Light Engine is Lumencor's high-performance solid state illuminator for digital pathology applications. It is designed from the ground up to work hand-in-hand with the latest monochrome cameras to generate RGB color transmitted light images with unprecedented sensitivity, spatial resolution, speed and color fidelity.

Conventionally, transmitted light color images have been acquired using white light sources and color cameras. However single-exposure acquisition of color information comes at the expense of lower speed, less spatial resolution, reduced dynamic range and increased noise in color cameras compared to gray-scale cameras. Color cameras also tend to be relatively expensive. Alternatively, monochrome cameras have been employed in inherently slow sequential exposure techniques. Now that monochrome cameras can be paired with a fast color-switching LIDA Light Engine, sequential RGB acquisition assumes the status of a preferred option rather than merely an alternative to color camera+white light source techniques.

The LIDA Light Engine integrates three solid state sources, including Lumencor's exclusive green luminescent light pipe, with the sophisticated control electronics required for high speed synchronization of light output with camera exposure time. Transmitted light images are captured in one electronically controlled high speed sequence. Variances associated with moving parts are eliminated, resulting in perfect alignment of pixel registered images across the wide fields of view afforded by modern sCMOS cameras. Independent control of the intensity of the three component light sources allows balanced color rendition without resorting to extensive post-processing of images.

Lumencor is excited to enable this synergistic combination of new illumination and camera technologies for histologists, clinical pathologists and anyone seeking improvements in the speed, sensitivity and precision of color transmitted light microscopy.

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



Features and Operating Characteristics:

Features	Details
Sources	3 solid-state sources: Red (610–650 nm), Green (510–600 nm), Blue (420–480 nm)
Light Delivery	Direct mount to transillumination port of major brand microscopes
Operational Modes	RGB sequential (camera triggered); white light for ocular viewing
Speed	Maximum 1 kHz RGB channel switching or all channels (white) on/off
Control Ports	(1) Rear panel USB port. (2) Rear panel DB15 TTL gating port
Functional Controls	USB: Direct control of channel on/off and output intensity TTL: Single-line sequential R>G>B switching or 3-line independent triggering of R, G and B sources
Control Interfaces	ELECTRONIC: Color channel selection and output intensity adjustment from USB connected computer running Lumencor GUI or third party software. MANUAL: Side-panel knobs for white light output on/off and intensity level
Power Requirements	40 W, 9 V, 4.45 A DC power supply included
Warranty	24 Months
Dimensions (WxLxH)	9 cm x 15 cm x 11 cm
Weight	< 2.0 kg
Package Contents	LIDA Light Engine, USB control cable, power supply and region-specific power cord
Optional Accessories	DB15-to-4X BNC TTL breakout cable (p/n 29-10081)