

# LumaScope 500

## Live Cell Fluorescence Microscope



### SPECIFICATIONS

Objectives	2.5x, 4x, 10x, 20x, or 40x
Field of View	4x – 6.4mm x 4.0mm
	10x – 2.5mm x 1.6mm
	20x – 1.28mm x 0.8mm
	40x – 0.64mm x 0.40mm
	100x – 0.26mm x 0.16mm
Interchangeable	Yes
Micropositioner	Yes, can be removed
Light Source	White (brightfield & positionable) & Blue 488 nm LED (fluorescence)
Camera	CMOS
Power Requirements	USB or 100-240 VAC, 50-60 Hz
Weight	<5 kg
Size	190 x 125 x 115 mm
Warranty	1 year parts and labor

ITEM #	SIZE #	DESCRIPTION	PRICE
ELS0010	1	LumaScope 500 Live Cell Microscope, 10x objective	\$5995
ELS0020	1	LumaScope 500 Live Cell Microscope, 20x objective	\$5995
ELS0040	1	LumaScope 500 Live Cell Microscope, 40x objective	\$5995
ELS0100	1	LumaScope 500 Live Cell Microscope, 100x objective (oil immersion)	\$5995
ELL0002	1	Optional 2.5x objective	\$ 600
ELL0004	1	Optional 4x objective	\$ 325
ELL0010	1	Optional 10x objective	\$ 325
ELL0020	1	Optional 20x objective	\$ 325
ELL0040	1	Optional 40x objective	\$ 325
ELL0100	1	Optional 100x objective	\$ 480



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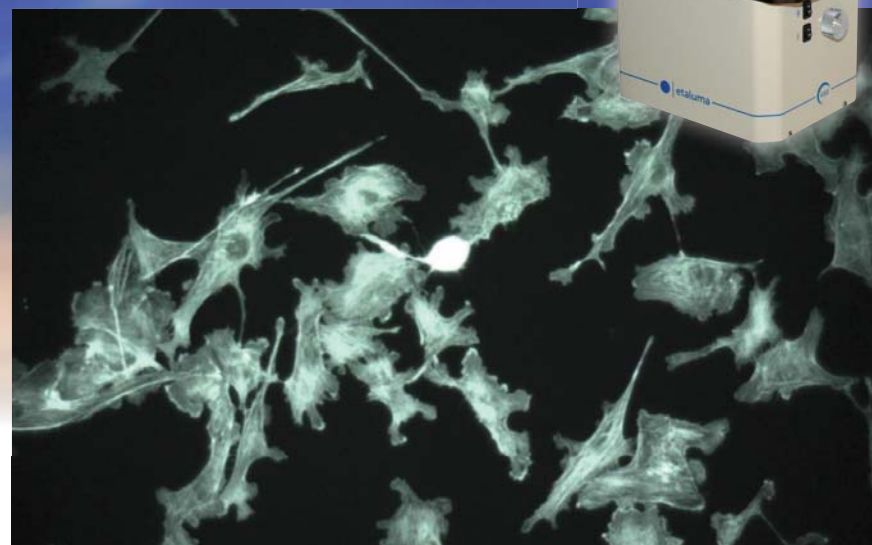
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## Live Cell Fluorescence Microscope

Little microscope.  
Big expectations.



Raw, uncropped image collected at 8 frames/sec of AlexaFluor 488 labeled anti-F Actin Ab in endothelial cells with a 40X objective.



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## Live Cell Fluorescence Microscope

### It lives in your incubator

The LumaScope was developed from a simple concept — can a research-grade inverted fluorescence microscope be manufactured for labs in remote, and often less well off, countries? The solution required maintaining image quality and reliability standards for warm and hot “open air lab spaces” — while not busting the lab budget. The LumaScope has succeeded by eliminating all superfluous design elements. It focuses instead on the use of solid-state technologies to provide surprisingly powerful image resolution. This single-channel fluorescence microscope is available with 2.5x, 4x, 10x, 20x or 40x objectives. Designed for open-air labs in Southeast Asia and Latin America, it has no problem handling the equally hot and humid environment of a cell culture incubator. And it is so compact that you can fit four into a standard cell culture incubator, making it an ideal tool for previously impossible live cell imaging experiments.

### Throw it in your suitcase

Microscopes are large and fragile instruments susceptible to the bumps and bruises associated with commercial flying. Not the LumaScope. Designed for jolts, drops, and hot and humid environments, the LumaScope is an ideal, high performance imaging system for the most extreme applications. Small and lightweight, its simple boxy shape makes it easy to pack in an assortment of carrying cases. Many of the external accessories, such as the slide stage and overhead bright field lamp, can be detached without tools for easier transport. The LumaScope makes a perfect companion at remote experimental sites.

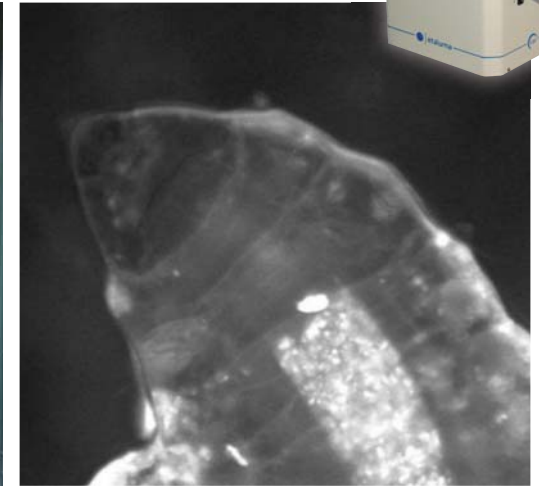
### Small enough to fit in your budget, too!

Cheap tools don't necessarily mean cheap results. The LumaScope design uses next generation electronic components that have been proven reliable and high performing in other applications. Whether it's the LEDs that provide stable, bright illumination for thousands of hours, or the CMOS digital camera with signal-to-noise ratios equal to their more expensive CCD cousins. The no frills design of the LumaScope can save researchers tens of thousands of dollars as compared to conventional microscopes from name brand manufacturers.



#### Small and robust for cell incubator use

The LumaScope is only a fraction of the size of comparable inverted microscopes at just under 240 cm<sup>2</sup> and under 12 cm high. The image above shows 4 systems sitting comfortably in a standard CO<sub>2</sub> incubator. With different options for staging, both slides and traditional cell culture plates and flasks are perfect for your imaging.



#### Videos and images from jungle use

This unidentified worm from a Central American rain forest was imaged using the automatic time-lapse feature on the LumaScope. The image above was acquired using the 20X objective and the fluorescence mode. The systems LED illuminates at 488nm maximum excitation, ideal for many auto-fluorescing structures in small transparent creatures. The LumaScope used in this study was packed in carry-on luggage and accidentally dropped to the floor by security, though its aluminum and steel casing protected the scope and imaging went unperturbed.



#### Image quality of scopes that cost 5X more

The Lumascopes are compatible with a wide variety of imaging platforms including glass slides and coverslips, polystyrene flasks and multi-well plates. The above image was rendered from Knox College using a LumaScope to visualize a GFP construct selectively expressed in *C. elegans*. This image was collected using the 40x objective and fluorescence mode.

