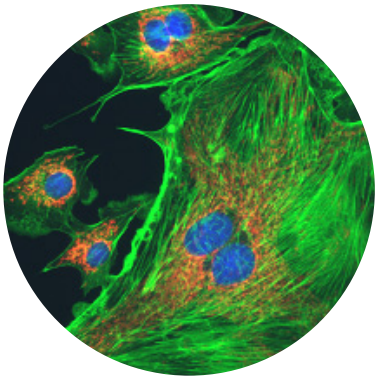
Live Cell Microscopy

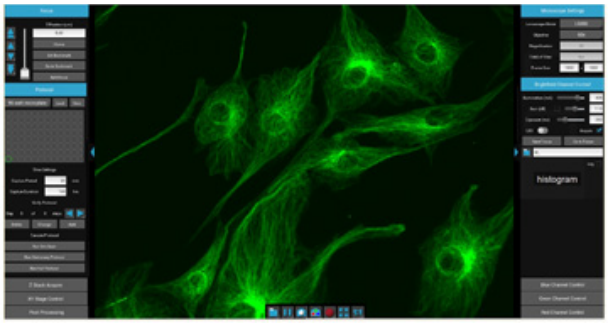
Introducing the LS800 Series microscopes
from Etaluma, the latest in high quality wide field
microscopy for your research

High Resolution
3-Color Fluorescence
Live Cell Imaging in Your Incubator

Live cell imaging
is our specialty



Near Diffraction-limited
resolution



LumaViewPro is a powerful microscope
control application

etaluma™

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Lumascope 800 Series

The **Lumascope 800 Series** is a multi-channel automated inverted microscope platform which offers the latest advances in optics, cameras, and user flexibility. The LS820 and LS850 in your incubator allows you to have a live cell imaging system that offers minimum phototoxicity and the most stable environment for long-term imaging.

Uses real microscope objectives

Multi-mode transmitted illumination technology

Optional motorized 4-position turret available on the LS850

Features

- High performance, diffraction-limited optics
- Three channel fluorescence, bright field and phase contrast
- Use in incubators, hoods, hypoxia chambers, and on the bench
- High speed stage with single digit micron precision for tiling with stitching available on the LS850
- Autofocus and z-stacks to 100 nm
- LumaViewPro control application on Windows, Mac, or Linux
- Optional automated 4-position turret for the LS850 only
- Accommodates microplates, microfluidics, slides, dishes, flasks and deck-top chambers

Specifications

LED Excitations	405 nm, 488 nm, 589 nm
Filter Set	Blue: Excitation 370-410 nm, Emission 429-462 nm Green: Excitation 473-491 nm, Emission 502-561 nm Red: Excitation 580-598 nm, Emission 612-680 nm
Transmitted Modes	Bright Field and Phase Contrast
Objectives	1.25x, 2.5x, 4x, 10x, 20x, 40x, 60x, 100x, incl. oil immersion
Camera	High QE Monochrome CMOS BSI Sensor; 4.4 megapixel, 12-Bit
Image Formats	TIF, BMP, PNG, JPG
Image Size	100 x 100 up to 2100 x 2100 pixels
Video Rate	45 FPS (exposure limited)
Automated XY	LS850 only: 110 mm x 74 nm, 1-3 micron positional reproducibility
Motorized Z	14 mm travel, 100 nm step, image-based autofocus, Z-stacks
Throughput (LS850)	96-well microplate, transmitted only, no AF: < 2 minutes
Control Software	LumaViewPro, Multi OS control application
Computer Requirements	Windows 11: Core i7, 1TB SSD, 16 GB RAM Mac OS: M1, 1TB SSD, 16 GB RAM Linux (Debian): 1 TB SSD, 16 GB RAM
Power Requirements	100-240 V, 50-60 Hz
Integration	Python source under the MIT Open Source License
Dimensions	LS850: 39.8 cm W x 29.7 cm D x 29.7 cm H LS820: 24 CM W x 22.6 cm D x 27.8 cm H
Weight	LS850: 21 lbs. (9.5 kg) LS820: 10 lbs. (5 kg)
Operating Conditions	4°C - 42°C, 5% - 95% RH non-condensing

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