



etaluma™  
microscopy simplified™

# LS720

Fully automated microscopy

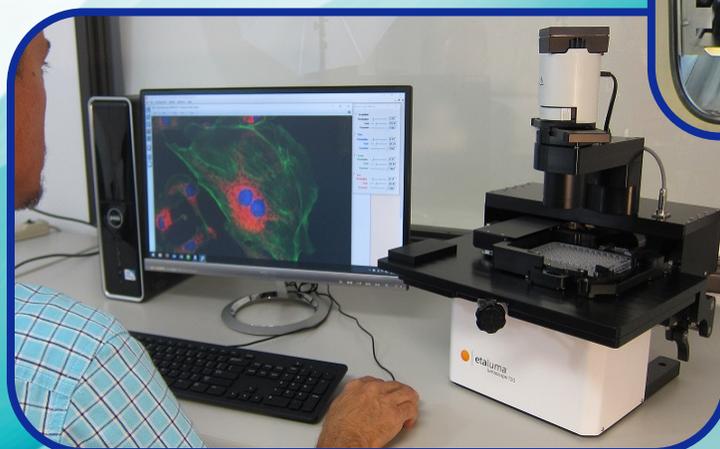
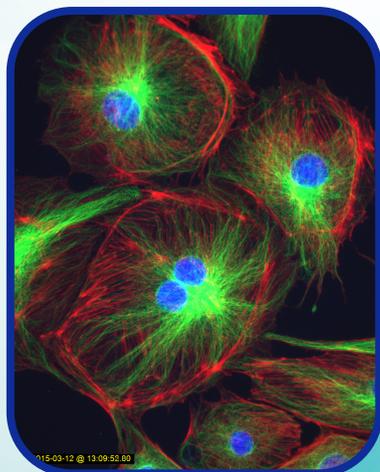
High Resolution 3-Color Fluorescence

Automated XY Stage & Auto Z-Focus

Live Cell Imaging in Your Incubator



LS720 with phase



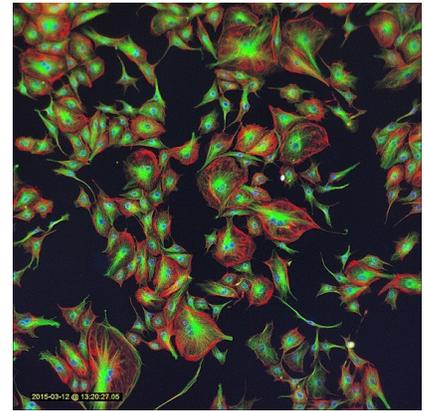
Blue, Green and Red Fluorescence, Brightfield, Optional Phase Contrast

[www.etaluma.com](http://www.etaluma.com)

# Lumascope™ 720

## Blue, Green & Red Fluorescence and Walk-Away Automation

The powerful, new Lumascope 720 (LS720) adds walk-away automation to the many features and high performance of the flagship 3-color LS620. Exquisite XY motion control, motorized focus that allows autofocus and z-stacks, and easy-to-configure software combine to facilitate your microscopy experiments and high content screens. Place the LS720 in your incubator and you have a live cell imaging system at a fraction of the cost of conventional HCS systems. Whether imaging multiple fields in your flasks or 1536 wells of cells with 3 fluorophores in a 48 hour time-lapse, the LS720 offers a whole new world of automated microscopy!



Typical 3-color fluorescent image with LS720 optics

### Features and Benefits

- Automated XY stage with autofocus in Z provides images (photos), time-lapse series, and videos recorded directly to your computer
- Fully functioning microscope empowers users to visualize cells from microplates, flasks, slides or custom labware
- Modern LED and advanced optical design provide near diffraction-limited (theoretical maximum) resolution
- Robust software allows set-up and control across many locations, including microplates and custom arrays
- Versatile and compact design enables use inside cell culture incubators and hoods
- Detects blue, green and red fluorophores, including BFP, DAPI, FITC, Fluo-4, GFP & mCherry
- Flip-up deck allows easy objective access
- Standalone, but also robot compatible
- Objective compatibility with standard lenses permits use of your own objectives

Lumascope 720 Specifications	
Optics	Blue, green & red fluorescence; brightfield
Phase Contrast	Phase contrast optional (Olympus)
Objective Options	1.25x, 2.5x, 4x, 10x, 20x, 40x, 60x, and 100x(oil) magnification
Objective Compatibilities	RMS-threaded, infinity corrected, 45 mm parfocal distance
Fluorescence Filters	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
Camera	High Sensitivity Monochrome CMOS Sensor; 5 megapixel, C-mount
Image Formats	JPG, BMP, TIF, or PNG
Image Size	100 x 100 to 1900 x 1900 pixels
Field of View	Up to 0.78 x 0.78 mm with 20x objective
Video Rates	Up to 10 frames per second (fps); up to 30 fps with reduced frame size
Automated XY Stage	SBS nest, 6- to 1536-well microplates; microfluidic chambers (contact Etaluma)
Subdeck (after top deck lifted)	No automation; most flasks, dishes, other
XY speed (seconds)	Image 96 wells: a) 1 color focus & image: 13 min; b) 3 color focus & image: 34 min
Computer Requirements	Windows 7, 8, 8.1, 10; Core i5, SSD; 2 monitors recommended
Automation Friendly	SDK available
Power Requirements	USB for Lumascope; 100-240 V, 50-60 Hz for autostage
Dimensions	37.4 cm W x 43.8 cm D x 46.8 cm H (incl. phase) [14.7 in W x 17.3 in D x 18.4 in H]
Weight	13 kg (29 lb) without phase accessory; 14 kb (31 lb) with phase accessory
Operating Conditions	0°C - 42°C, 5% - 95% RH non-condensing