

# INFINITY3-1PF

High Sensitivity, Low Noise, 1.4 Megapixel Cooled CCD USB 2.0 Camera

Cooled CCD Color or Monochrome Microscopy Camera for Challenging Fluorescence Applications Requiring Longer Exposures



## INFINITY Fluorescence Series Bundle Includes

- INFINITY3-1PF camera
- INFINITY ANALYZE and INFINITY CAPTURE Software
- INFINITY Advantage Pack LuIAP-2
- Free 9-month trial of Media Cybernetics Image-Pro Premier
- Extended 5-year warranty



## INFINITY3-1PF

Lumenera's INFINITY3-1PF camera is designed to be used in a wide variety of scientific applications. Uncompressed images in live streaming video and still-image capture are provided across a USB 2.0 digital interface. No framegrabber is required. Hardware and software based synchronization trigger is available. This camera takes advantage of Lumenera's unique memory buffer technology, reliably delivering images while running the camera at the sensor's maximum output.

## High Sensitivity and Color Reproduction

Equipped with Sony's ICX285 CCD sensor, the INFINITY3-1PF has the unmatched light sensitivity needed for low light applications. Superior performance is achieved through low noise electronics, high grade components and Lumenera's unique thermal management techniques.

## Full Image Analysis Software

INFINITY CAPTURE, an intuitive image capture program, and INFINITY ANALYZE, a full image analysis package offering; camera control, measurement, annotations, tiling and post capture enhancement, are both included.

## Free 9-Month Trial of Media Cybernetics Image-Pro Premier

Image-Pro Premier offers intuitive tools that make it easy to capture, process, measure, analyze and share your images and valuable data.

## Third-Party Software Integration

INFINITY cameras are integrated into a variety of third-party software packages through direct drivers or with TWAIN/DirectX support.

## Mac Camera Software

Lumenera offers support for INFINITY camera users operating on a Mac platform. A Mac camera driver, ImageJ plug-in and the INFINITY ANALYZE for Mac application package are available for the INFINITY3-1PF.

## Superior Technical Assistance Center (TAC)

As a Lumenera customer you gain access to the TAC group and knowledge base which provide full support for cameras, software and microscopy applications.

## Features

- Cooling technology reduces thermal noise during low light fluorescent imaging
- Low noise 1.4 megapixel CCD image sensor results in crisp color quality for the most demanding brightfield, phase contrast, and fluorescent applications including GFP, FISH, NIR, FRET, life science and geology
- Full color sub-windowing allows for rapid focus and scanning of samples: 15 fps at full 1392x1040 resolution
- Select 8 & 12-bit pixel data modes
- C-Mount facilitating installation on all microscope configurations including upright, inverted and stereo
- Software compatible with Windows 10, 8, 7, Vista, Mac OS X 10.7, 32 and 64-bit operating systems

## Image-Pro Premier Software Features

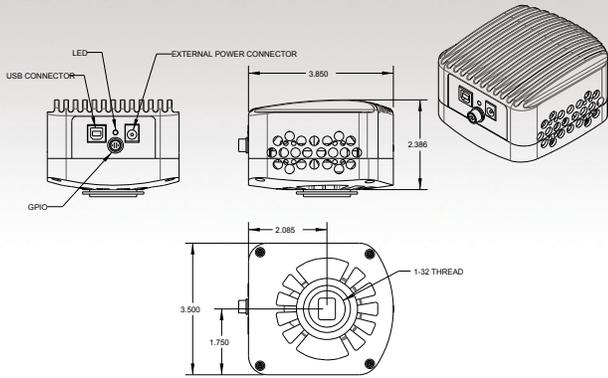
- 64-bit single capture and streaming to disk
- Quick access to intensity and morphology over-time studies
- Extensive microscopy file format support and simple color compositing
- Industry-leading co-localization analysis on whole images or user-defined regions
- Analysis tools to identify, count, measure, and classify whole cells, nuclei, membranes, cytoplasmic structures, and more
- Perform population studies using thousands of images with intuitive batch processing
- Image-Pro Premier is compatible with Windows XP SP 3 and later (32 bit), and Windows 7 Professional and Ultimate (32 and 64 bit)
- Discount offer for purchase of software

## Warranty

- Five (5) year warranty

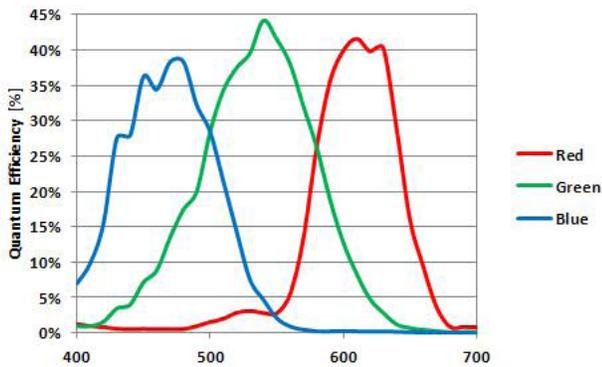


Mechanical Drawing

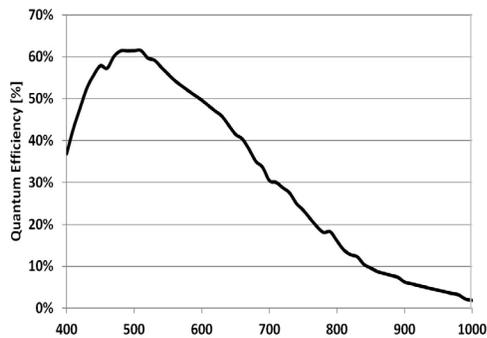


INFINITY3-1 WITH GPIO

Color Quantum Efficiency Curves

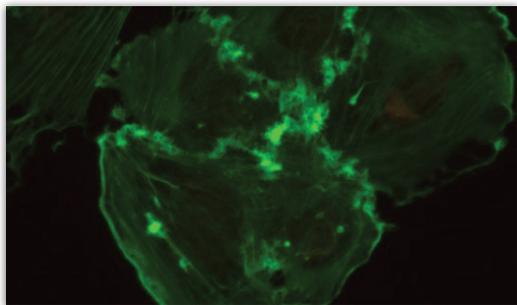


Monochrome Quantum Efficiency



Sample Images

For sample images please visit our online gallery at: [www.lumenera.com/microscopyimages/](http://www.lumenera.com/microscopyimages/)



Sensor Specifications	
Image Sensor	SONY ICX285, CCD, color or mono, progressive scan
Optical Format	2/3 "
Imager Size	Diagonal 11 mm
Pixel Size	6.45 x 6.45 μm
Resolution	1392 x 1040 pixels
Camera Specifications	
Frame Rate	15 fps at full resolution, increased through binning and ROI
Bit Depth	8 or 12-bit
Binning Modes	2 x 2, 4 x 4
Exposure Control	Manual and automatic control
Exposure Range	3 μs to 211 ms (video) 2 μs to 10 min (snapshot)
Gain Control	Manual and automatic control
Gain Range	Programmable / 1 to 10X
White Balance	Manual and automatic control
Trigger Modes	Hardware and software triggerable
Camera Characteristics	
Full Well Depth	18,000 e-
Dynamic Range	70 dB
Quantum Efficiency	44 % (color peak), 62 % (mono peak)
Read Noise	8 e-
Dark Current Noise	0.15 e-/s at 22 °C
Mechanical Specifications	
Data Interface	USB 2.0
General Purpose I/O	Hirose HR25-7TR-8S(73)
Lens Mount	Adjustable C-Mount standard
Dimensions	97.8 x 88.9 x 60.6 mm 3.85 x 3.5 x 2.4 inch
Mass	780 g
Operating Temperature	0 to 50 °C
Storage Temperature	-30 to 70 °C
Cooling Type	Hermetically sealed and dry gas filled thermo electro-cooling to 25 °C below ambient
Operating Humidity	5 to 95%, non-condensing
Onboard Memory	Camera has onboard non-volatile memory storage
Camera Software	
Operating Systems	Windows 10, 8, 7, Vista, Mac OS X 10.7 32 and 64-bit
Power and Emissions	
Power Consumption	~2.5 W uncooled / ~8.5 W cooled
Power Requirement	5 V DC, 12.5 W (included with camera)
Emissions Compliances	FCC Class B, CE Certified
Hazardous Materials	RoHS, WEEE Compliant
Warranty	Five (5) years
Included In The Box	
INFINITY3-1PF	1.4 MP Digital Camera and 3m USB 2.0 Cable
LuINFSW-DVD	DVD with INFINITY user application software, TWAIN driver and documentation

Ordering Information	
INFINITY3-1PFC	1.4 MP Cooled CCD Color Camera
INFINITY3-1PFM	1.4 MP Cooled CCD Monochrome Camera
LuSDKSW	Software Developer's Kit (Web Download)
La050315	5 V DC, 3.0 A, 15 W Power Supply

Recommended Applications

Fluorescence Microscopy; Green Fluorescence Protein Applications; Fluorescent In Situ Hybridization; DNA Analysis; Live Cell Imaging; Brightfield, Darkfield, DIC/Phase techniques; Near IR Applications; Histology, Pathology and Cytology; Forensic Analysis

