INFINITY3S-1UR

High Performance. Low Price.

INFINITY3S-1UR

Teledyne Lumenera's INFINITY3S-1UR is a high-performance microscopy camera designed for both brightfield and routine fluorescence imaging, and priced to be accessible to budget-constrained users. This multiple-purpose camera enables virtually any microscopy to image in both color and fluorescence. Each camera includes intuitive software and is backed by an industry-leading 4-year warranty.

Superior Sensitivity and Quantum Efficiency

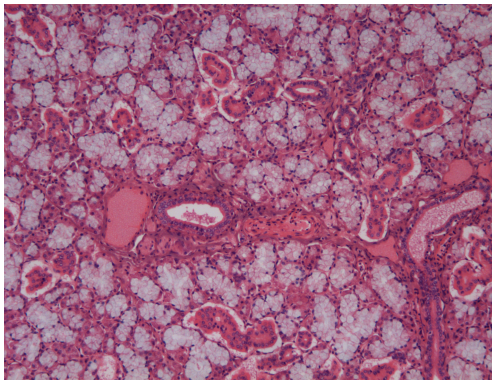
The INFINITY3S-1UR has the unmatched light sensitivity and extremely low noice. This delivers high image quality and value for challenging low-light applications such as fluorescence and NIR imaging.

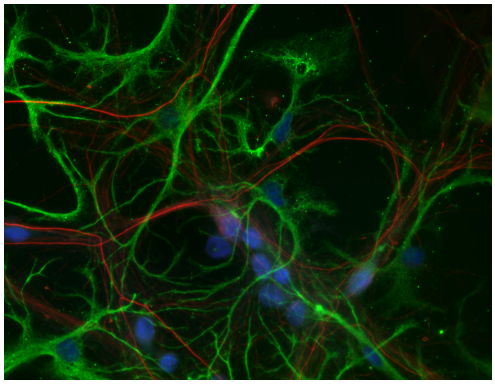
Full Image Analysis Software Included

INFINITY ANALYZE microscopy software is included with the INFINITY3S-1UR. There are no license fees or fees associated with software updates. This model ensures users have access to the most up to date software features without extra costs.

Superior Technical Assistance Center (TAC)

All Teledyne Lumenera cameras are supported by an experienced team of technical support and imaging experts widely acclaimed in the industry. As a Teledyne Lumenera customer you gain access to the TAC group and knowledge base, providing full support for cameras, software and microscopy applications.





Features

- Based on an ultra-sensitive Sony CCD sensor that provides low noise, high quantum efficiency, and accurate images in both brightfield and fluorescence.
- Color or monochrome versions available using the Sony ICX825 CCD Global Shutter sensor with large field of view (2/3" optical format) and resolution of 1392 x 1040 using 6.45 x 6.45 µm pixels.
- Easy to install with plug and play, high-speed USB 3.0 interface for fastest image delivery and simplified connectivity. Fully backward compatible with USB 2.0 supported.
- Microscopy software included for image capture, video preview and recording, measurement, annotation and a fluorescence mode for combining channels. Compatible with Windows 10, 8, 7, Vista, Mac OS X 10.7, 32 and 64-bit operating systems.
- Region of Interest (ROI) option offering higher frame rates.
- Selectable 8 or 14-bit pixel data.
- Includes TWAIN and DirectX/ Direct Show support.
- Support for capture and analysis applications such as MetaMorph and Micro-Manager.
- GPIO for control of peripherals and synchronization.
- Recommended coupler: 0.67x.

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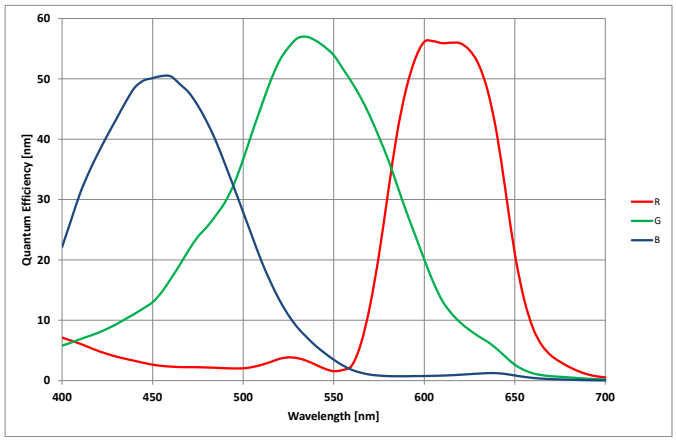
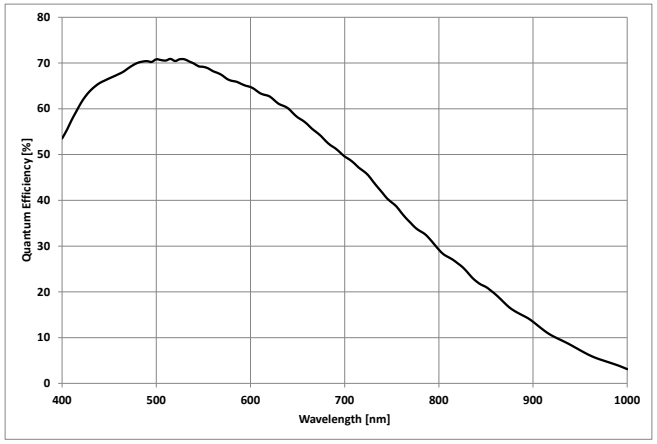
Color Quantum Efficiency Curves



Monochrome Quantum Efficiency Curve



Recommended Applications

- Low Light Fluorescence
- Immunofluorescence
- Brightfield, Darkfield, DIC/Phase techniques
- DNA Analysis
- Live Cell Imaging
- Whole Slide Imaging
- Near-Infrared DIC
- Histology, Pathology and Cytology
- Calcium/Ion Imaging
- Forensic Analysis
- Semiconductor Inspection
- Metallurgical Microscopy
- Gel Documentation

Sensor Specifications	
Image Sensor	SONY ICX825, CCD, color or monochrome
Optical Format	2/3"
Imager Size	Diagonal 11 mm
Pixel Size	6.45 x 6.45 µm
Resolution	1392 x 1040 pixels
Region of Interest Control	Any multiple of 16 x 16 pixels
Camera Specifications	
Max Frame Rate	60 fps at 1.4 megapixel (monochrome version) 45 fps at 1.4 megapixel (color version)
Bit Depth	8 or 14-bit
Binning Modes	2 x 2, 4 x 4, 8 x 8 (mono only)
Exposure Control	Manual and automatic control
Exposure Range	3 µs to 71 min (snapshot) 23 µs to 1.3 s (video)
Gain Control	Manual and automatic control
Gain Range	~0.6 to 44x
White Balance	Manual and automatic control
Trigger Modes	Hardware and software triggerable
Camera Characteristics	
Peak Sensitivity	Mono: 18 DN/(nJ/cm²),Color: 9.5 DN/(nJ/cm²) (Global and channel gains at unity)
Dynamic Range	~70 dB
Full Well Depth	~20,000 e- (at slowest clock, lowest gain)
Peak Quantum Efficiency	57% (color), 71 % (mono)
Read Noise	~5.8 e- (in dual-tap mode, slowest clock)
Dark Current Noise	<1 e-/s at 22 °C
Mechanical Specifications	
Data Interface	USB 3.0 (USB 2.0 support for lower frame rates)
General Purpose I/O	Locking Hirose MXR-8R-8SA(71)
Lens Mount	Adjustable C-mount standard
Dimensions	97.8 x 69.8 x 50.8 mm 3.85 x 2.75 x 2.00 inch
Mass	375 g
Operating Temperature	0 to 50 °C
Storage Temperature	-30 to 70 °C
Operating Humidity	5 to 95 %, non-condensing
Shock / Vibration	50 G shock, 5 G (2-200 Hz) vibration
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	5 W max in full frame rate mode
Power Requirement	External 5 V DC, 3.0 A, power supply (included)
Emissions Compliances	FCC Class B, CE Certified
Hazardous Materials	RoHS, WEEE Compliant
Warranty	Four (4) years
Included In The Box	
INFINITY*3S-1UR*	1.4 MP digital camera with 3m USB 3.0 cable
La50300	Power Supply: 5 V DC, 15 W

Ordering Information	
INFINITY*3S-1*URC	1.4 MP Uncooled CCD Color USB 3.0 Camera
INFINITY*3S-1*URM	1.4 MP Uncooled CCD Monochrome USB 3.0 Camera
5YR Protection Plan - 2	5-Year Extended Warranty with Advanced Replacement
La050315	5 V DC, 3.0 A,15 W Power Supply (included with camera)
LuSDKSW	Software Developer's Kit (Web Download)
La2000PAFL	GPIO cable with leads

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