INFINITY3-3URF
High-Speed, High Dynamic Range and Sensitivity, 2.8 Megapixel CCD USB 3.0 Camera

Cooled Performance from an Uncooled Camera. Ideal for Scientific Image Analysis in Low Light Life Science, Clinical and Material Science Applications

INFINITY Fluorescence Series Bundle Includes
- INFINITY3-3URF camera
- INFINITY ANALYZE and INFINITY CAPTURE Software
- INFINITY Advantage Pack LuAP-2
- Free 9-month trial of Media Cybernetics Image-Pro Premier
- Extended 5-year warranty

INFINITY3-3URF
Lumenera's INFINITY3-3URF is a high-speed, high-sensitivity research-grade camera with a 2.8 megapixel resolution. The INFINITY3-3URF incorporates Sony's remarkable ICX674 CCD sensor, unlocking the high frame rate capability via a high-speed USB 3.0 data interface. Full resolution images are sent to a host computer at up to 53 frames per second (fps). The research-grade designation of the INFINITY3-3URF is a testament to the low noise electronics, high-grade components and unique thermal management techniques. The result is an industry-leading, high-performance, low noise digital camera, alone in its class.

Superior Sensitivity and Color Reproduction
The INFINITY3-3UR has the unmatched light sensitivity needed for low light applications. Relying on Sony's EXview HAD II technology, this camera offers extremely high dynamic range, 4.54 x 4.54 µm pixels and very low noise. The INFINITY3-3URF delivers outstanding image quality and value for challenging low light applications such as fluorescence and NIR imaging.

USB 3.0 High-Speed Plug-and-Play Interface
The INFINITY3-3URF uses the latest USB 3.0 technology at 5 Gbits/sec to deliver the fastest image transfer - even at its highest resolution. 128 MB of onboard memory for frame buffering ensures dependable and reliable image delivery at full frame rate and highest resolution even in the most demanding systems. USB 3.0 is the ideal choice for microscopy as it is readily available on today's computers, while plug-and-play connectivity makes for installation easy. Simplified I/O cabling is provided through a locking Hirose connector supporting 1 optically isolated output, 1 optically isolated input and 2 configurable I/O ports. USB 2.0 is fully supported (with reduced performance).

Full Image Analysis Software Included
INFINITY CAPTURE, an intuitive image capture program, and INFINITY ANALYZE, a full image analysis package offering camera control, measurement, annotation, tiling and post capture enhancement, are included with the camera. Camera and software combine to create a complete microscopy imaging solution for your application.

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.

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

Image Sensor: SONY ICX674, CCD, color or monochrome
Optical Format: 2/3"
Imager Size: Diagonal 10.972 mm
Pixel Size: 4.54 x 4.54 µm
Resolution: 1936 x 1456 pixels
Region of Interest Control: Any multiple of 16 x 16 pixels (quad tap mode)

Camera Specifications

Frame Rate: 53 fps (1936 x 1456), 60 fps (1920 x 1080), 109 fps (640 x 480)
Bit Depth: 8 or 14-bit
Binning Modes: 2 x 2, 4 x 4, 8 x 8 (3 x 3 mono only)
Exposure Control: Manual and automatic control
Exposure Range: 3 µs to 71 min (snapshot)
Gain Control: Manual and automatic control
Gain Range: 0.8 to 58x (color), 0.8 to 33x (mono)
White Balance: Manual and automatic control
Trigger Modes: Hardware and software triggerable

Camera Characteristics

Peak Sensitivity: Color: 4.2 DN/(nJ/cm²), Mono: 7.3 DN/(nJ/cm²) (Global and channel gains at unity)
Dynamic Range: 68.8 dB (Color), 65.3 dB (Mono)
Full Well Depth: ~17,000 e- (Color), ~11,400 e- (Mono)
Quantum Efficiency: 61% (Color), 68 % (Mono)
Read Noise: 6.2 e- (4 taps, 16 fps, 25 ºC ambient)
Dark Current Noise: <1 e-/s (at 22 ºC ambient)

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
Mass: 340 g
Operating Temperature: 0 to 50 ºC
Storage Temperature: -30 to 70 ºC
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: 6 W max in full frame rate mode
Power Requirement: External 5 V DC, 1.2 A, power supply (included)
Emissions Compliances: FCC Class B, CE Certified
Hazardous Materials: RoHS, WEEE Compliant
Warranty: Five (5) years

Included In The Box

INFINITY3-3UR
2.8 MP Digital Camera and USB 3.0 cable
LuINFSW-DVD
DVD with INFINITY ANALYZE and CAPTURE software, TWAIN driver and documentation

Ordering Information

INFINITY3-3URFC
2.8 MP Uncooled CCD Color USB 3.0 Camera
INFINITY3-3URFM
2.8 MP Uncooled CCD Monochrome USB 3.0 Camera
La050315
5 V DC, 3.0 A,15 W Power Supply
LuSDKSW
Software Developer’s Kit (Web Download)
La2000PAFL
GPI/O Breakout Cable

Recommended Applications

Brightfield; Darkfield; Live Cell Imaging; Histology; Pathology; Cytology; Gel Documentation; Whole Slide Imaging; Low Light Fluorescence; Quantitative Analysis.

Sample Images

For sample images please visit our online gallery at: www.lumenera.com/microscopyimages/