

# INFINITY 1-5

5.0 Megapixel CMOS USB 2.0 Camera

Scientific Digital Imaging for Documentation in Life Science, Clinical and Material Science Applications



## INFINITY 1-5

For applications that demand extremely high resolution, the INFINITY 1-5 camera produces a full 2592 x 1944 video preview with speeds of 7 frames per second (fps) in both color and monochrome formats. This full 5.0 megapixel sensor allows users to view fine detail in samples and provide a high resolution preview to large monitors and overhead projectors.

### Excellent Color Reproduction

Years of experience in the microscopy market have allowed Lumenera to develop specialized color algorithms ensuring excellent color reproduction in samples ranging from stained cells to water inspection.

### Full Image Analysis Software Included

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. Camera and software combined to create a complete microscopy imaging solution for your application.

### USB 2.0 Plug-and-Play Interface

Once the software has been installed, running one or more cameras on a single computer is as simple as plugging them into a high-speed USB 2.0 port.

### 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

A Mac camera driver, capture application and ImageJ plug-in are available for the INFINITY 1-5. Please go to [www.lumenera.com](http://www.lumenera.com) for up-to-date details.

### Superior Technical Assistance Center (TAC)

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

## Features

- Low noise progressive scan 1/2.5" 5.0 megapixel CMOS sensor
- Full color sub-windowing for rapid focus and scanning of samples
- 7 fps at full 2592 x 1944 resolution and 60 fps at 640 x 480 resolution
- High-speed USB 2.0 for ease of installation on any computer
- Selectable 8 or 12-bit pixel data modes
- Software compatible with Windows XP, Windows Vista, Windows 7, Mac OSX, 32 and 64-bit
- Includes TWAIN and DirectX/Direct Show support

## Recommended Applications

- Brightfield
- Darkfield
- Live Cell Imaging
- Histology
- Pathology
- Cytology
- Defect Analysis
- Semiconductor Inspection
- Metrology

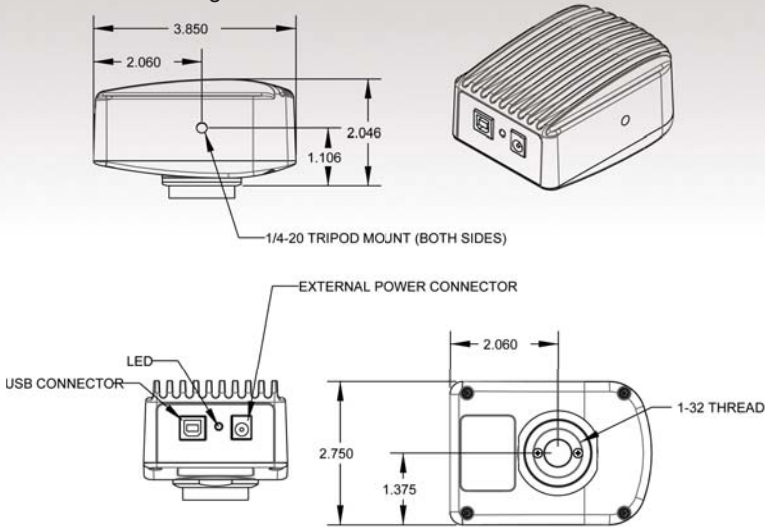
## Warranty

- One (1) year parts and labor

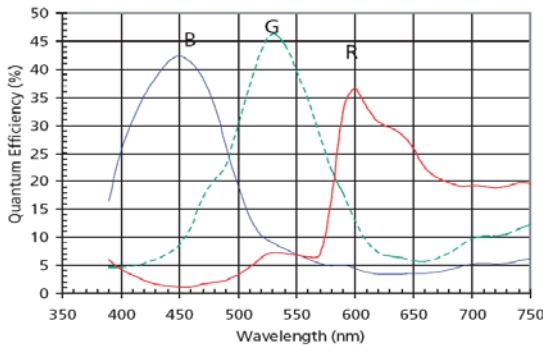
## Microscope Coupler

- Requires 0.5 x C-mount coupler

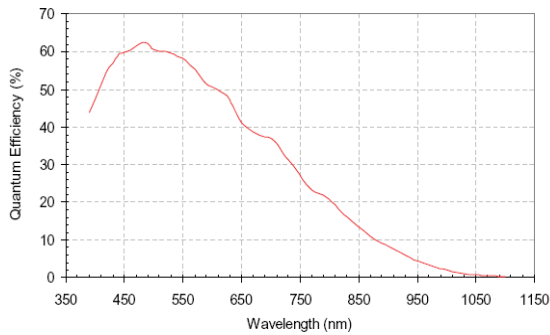
Mechanical Drawing



Color Quantum Efficiency Curve



Monochrome Quantum Efficiency Curve



Ordering Options

|                         |  |
|-------------------------|--|
| INFINITY ANALYZE MODULE | INFINITY ANALYZE Advanced Features Module (Multi-Focus Composition and Spherical Aberration Correction Features) |
| LuSDKSW                 | Software Developer's Kit (Web Download)  |
| LuSDKSW-DVD             | Software Developer's Kit (DVD)   |

| Sensor Specifications       |   |
|-----------------------------|---|
| Image Sensor                | Micron MT9P031, CMOS, color or monochrome, progressive scan   |
| Optical Format              | 1/2.5"  |
| Active Area                 | 5.7 x 4.28 mm   |
| Pixel Size                  | 2.2 x 2.2 μm  |
| Resolution                  | 2592 x 1944 pixels  |
| Region of Interest Control  | Any multiple of 8 x 8 pixels, 32 x 32 pixels minimum  |
| Camera Specifications       |   |
| Frame Rate                  | 7 fps   |
| Bit Depth                   | 8 or 12-bit   |
| Binning / Subsampling Modes | 2 x 2, 4 x 4  |
| Exposure Control            | Manual and automatic control  |
| Exposure Range              | 106 μs to 3 s (video), 106 μs to 3 s (snapshot)   |
| Gain Control                | Manual and automatic control  |
| Gain Range                  | 1 to 3.88 x   |
| White Balance               | Manual and automatic control  |
| Camera Characteristics      |   |
| Sensitivity                 | Good  |
| Dynamic Range               | 49 dB   |
| Full Well Capacity          | 15,000 e-   |
| Quantum Efficiency          | 47 % (green-peak) , 62 % (mono-peak)  |
| Read Noise                  | 20 e- rms   |
| Dark Current Noise          | <8 e-/s at 22 °C  |
| Mechanical Specifications   |   |
| Data Interface              | USB 2.0   |
| Lens Mount                  | Adjustable C-mount standard   |
| Dimensions                  | 57.15 x 97.79 x 39.62 mm<br>2.25 x 3.85 x 1.56 inch   |
| Mass                        | 330 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 to 200 Hz) vibration   |
| Camera Software             |   |
| Operating Systems           | Windows XP, Vista, 7, Mac OSX, 32 and 64-bit  |
| Power and Emissions         |   |
| Power Consumption           | ~2.5 W  |
| Power Requirement           | USB bus power only  |
| Emissions Compliances       | FCC Class BE, CE Certified  |
| Hazardous Materials         | RoHS, WEEE Compliant  |
| Warranty                    | One (1) year  |
| System Requirements         |   |
| Recommended PC Specs:       | <ul style="list-style-type: none"> <li>Pentium 4, 1.3 GHz or higher</li> <li>512 MB RAM</li> <li>500 MB hard drive free space or more</li> <li>USB 2.0 Port</li> <li>Windows 7</li> </ul> |
| Minimum PC Specs:           | <ul style="list-style-type: none"> <li>600 MHz Processor</li> <li>256 MB of SDRAM</li> <li>200 MB hard drive free space</li> <li>USB 2.0 Port</li> <li>Windows XP</li> </ul>              |
| Included In The Box         |   |
| INFINITY 1-5                | 5 MP Digital Camera for USB 2.0   |
| LuINFSW-DVD                 | DVD with INFINITY user application software (including INFINITY ANALYZE), TWAIN driver and documentation  |
| Lu802                       | 2 m USB 2.0 Cable   |
| Ordering Information        |   |
| INFINITY 1-5C               | 5.0 MP Color CMOS Microscopy Camera   |
| INFINITY 1-5M               | 5.0 MP Monochrome CMOS Microscopy Camera  |



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