

# INFINITY2-3

3.3 Megapixel CCD USB 2.0 Camera

High Resolution CCD Color

Microscopy Camera for Qualitative Image Archiving



## INFINITY2-3

For applications demanding a higher resolution, the INFINITY2-3 allows users to view fine detail in their samples without the pixilation commonly found in lower resolution cameras. A 2080 x 1536 resolution positions this camera as an excellent solution for previewing images on high definition monitors or overhead projectors, as well as the production of larger printed images for posters and charts.

### Superior Sensitivity and Color Reproduction

Years of experience in the microscopy market have allowed Lumenera to develop specialized algorithms ensuring excellent color reproduction. Additionally, INFINITY software allows the adjustment of all live preview color facets, enabling users to apply their own personal preferences to each image. For lower light applications the Sony CCD sensor has an extremely high dynamic range, resulting in excellent camera sensitivity.

### 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

Sharing and installation of one or more cameras on a single computer is quick and simple through a high-speed USB 2.0 interface. This camera is compatible with the USB 3.0 interface, supporting the existing USB 2.0 frame rates.

### Third-Party Software Integration

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

### 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

- Low noise progressive scan 1/1.8" 3.3 megapixel Sony ICX262 CCD sensor
- Full color sub-windowing allows for rapid focus and scanning of samples; up to 30 fps at 640x480 resolution
- 8 or 12-bit pixel data modes
- Software compatible with Windows 10, 8, 7, Vista, 32 and 64-bit operating systems
- Includes TWAIN and DirectX/ Direct Show support

## Recommended Applications

- Brightfield
- Darkfield
- Live Cell Imaging
- Histology
- Pathology
- Cytology
- Defect Analysis
- Semiconductor Inspection
- Metrology
- Gel Documentation
- Moderate Light Fluorescence
- Quantitative Analysis

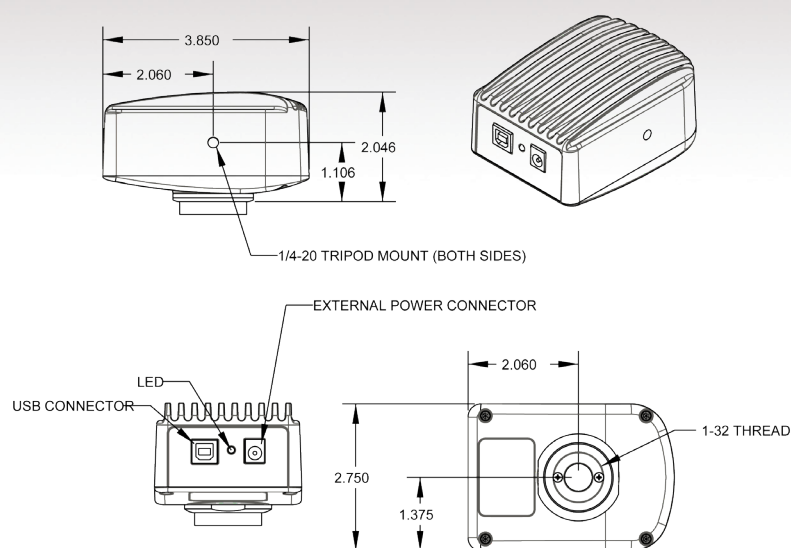
## Warranty

- Three (3) year warranty

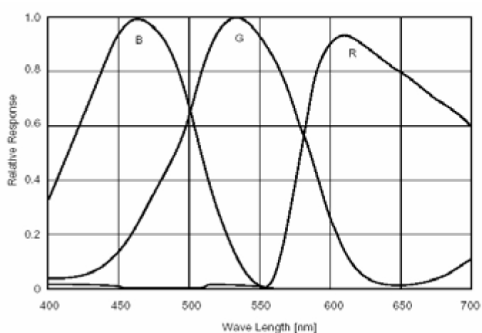
## Microscope Coupler

- Requires 0.5x c-mount coupler





Color Quantum Efficiency Curves



| Sensor Specifications      |                                                                                                                                                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor               | Sony ICX262, 3.3 megapixel, CCD, color, progressive scan                                                                                                                                                                                 |
| Optical Format             | 1/1.8"                                                                                                                                                                                                                                   |
| Imager Size                | Diagonal 8.93mm                                                                                                                                                                                                                          |
| Pixel Size                 | 3.45 x 3.45 $\mu$ m                                                                                                                                                                                                                      |
| Resolution                 | 2080 x 1536 pixels                                                                                                                                                                                                                       |
| Region of Interest Control | Any multiple of 16 x 16 pixels                                                                                                                                                                                                           |
| Camera Specifications      |                                                                                                                                                                                                                                          |
| Frame Rate                 | 5 fps (2080 x 1536)                                                                                                                                                                                                                      |
| Bit Depth                  | 8 or 12-bit                                                                                                                                                                                                                              |
| Binning                    | 2 x 2, 3 x 3, 4 x 4                                                                                                                                                                                                                      |
| Exposure Control           | Manual and automatic control                                                                                                                                                                                                             |
| Exposure Range             | 118 $\mu$ s to 2.97 s (video), 50 $\mu$ s - 10 s (snapshot)                                                                                                                                                                              |
| Gain Control               | Manual and automatic control                                                                                                                                                                                                             |
| Gain Range                 | 1 to 10 x                                                                                                                                                                                                                                |
| White Balance              | Manual and automatic control                                                                                                                                                                                                             |
| Camera Characteristics     |                                                                                                                                                                                                                                          |
| Dynamic Range              | 58 db                                                                                                                                                                                                                                    |
| Pixel Well Depth           | 10,630 e-                                                                                                                                                                                                                                |
| Quantum Efficiency         | 43% (@ 535 nm, color)                                                                                                                                                                                                                    |
| Read Noise                 | 13 e-                                                                                                                                                                                                                                    |
| Dark Current Noise         | <1 e-/s at 22 °C                                                                                                                                                                                                                         |
| Mechanical Specifications  |                                                                                                                                                                                                                                          |
| Data Interface             | USB 2.0                                                                                                                                                                                                                                  |
| Lens Mount                 | Adjustable C-mount standard                                                                                                                                                                                                              |
| Dimensions                 | 97.8 x 69.8 x 50.8 mm<br>3.85 x 2.75 x 2.00 inch                                                                                                                                                                                         |
| Mass                       | 300 g                                                                                                                                                                                                                                    |
| Operating Temperature      | 0 to 50 °C                                                                                                                                                                                                                               |
| Storage temperature        | -30 to 70 °C                                                                                                                                                                                                                             |
| 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, 32 and 64-bit                                                                                                                                                                                                   |
| Power and Emissions        |                                                                                                                                                                                                                                          |
| Power Consumption          | ~2.5 W                                                                                                                                                                                                                                   |
| Power Requirement          | USB bus power (optional 5 V DC, 500 mA)                                                                                                                                                                                                  |
| Emissions Compliances      | FCC Class B, CE Certified                                                                                                                                                                                                                |
| Hazardous Materials        | RoHS, WEEE Compliant                                                                                                                                                                                                                     |
| Warranty                   | Three (3) 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 or more</li> <li>60 MB hard drive free space or more</li> <li>USB 2.0 or USB 3.0 Port</li> <li>Windows 10, 8, 7, Vista, 32 and 64-bit</li> </ul> |
| Included In The Box        |                                                                                                                                                                                                                                          |
| INFINITY2-3C               | 3.3 MP digital camera + 3m USB 2.0 Cable                                                                                                                                                                                                 |
| LuINFSW-DVD                | DVD with INFINITY user application software (including INFINITY ANALYZE), Twain driver and documentation                                                                                                                                 |
| Ordering Information       |                                                                                                                                                                                                                                          |
| INFINITY2-3C               | 3.3 MP CCD Color Camera                                                                                                                                                                                                                  |
| Ordering Options           |                                                                                                                                                                                                                                          |
| LuAFM                      | INFINITY ANALYZE Advanced Features Module (Multi-Focus Composition and Spherical Aberration Correction Features)                                                                                                                         |
| LuSDKSW                    | Software Developer's Kit (Web Download)                                                                                                                                                                                                  |
| La050315                   | 5 V DC, 3.0 A, 15 W Power Supply                                                                                                                                                                                                         |

