# INFINITY*X-32*

## 32 Megapixel CCD USB 2.0 Camera

High Resolution CCD Color or Monochrome

Microscopy Camera for Qualitative Image Archiving

## INFINITY *X-32*

The INFINITYX family of cameras are pixel shifting, high resolution imaging solutions which allow for the examination of minute detail in samples. Lumenera's INFINITY*X-32* digital CCD camera is based on the Sony ICX274 2.0 megapixel sensor which offers 2, 8, 18 and 32 megapixel modes. This camera is well suited for all applications ranging from Brightfield documentation to Life Science research.

### Superior Sensitivity and Color Reproduction

Years of experience in the microscopy market have allowed Lumenera to develop specialized color algorithms ensuring near-perfect color reproduction. Additionally, the software included with all INFINITY cameras allows the adjustment of all facets of the live preview. This allows users to apply their 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.

### Mac Driver and Plug-In

A Mac driver and ImageJ plug-in are available for the INFINITY*X-32*. Please refer to the Lumenera webpage www.lumenera.com for up-to-date details.

### Superior Technical Assistance Center (TAC))

As a Lumenera partner 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 2.0 megapixel Sony ICX274 CCD sensor
- Full color sub-windowing allows for rapid focus and scanning of samples; up to 25 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
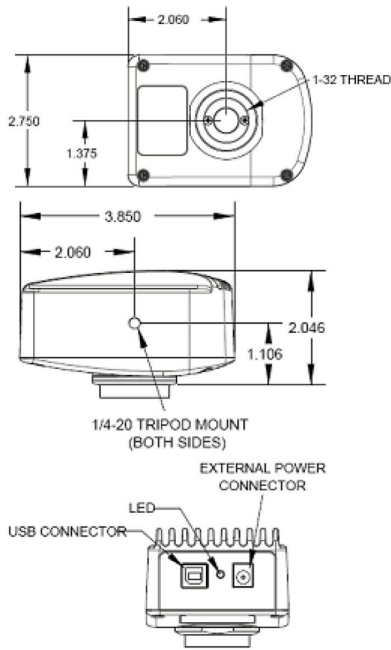- Gel Documentation
- Quantitative Analysis

## Warranty

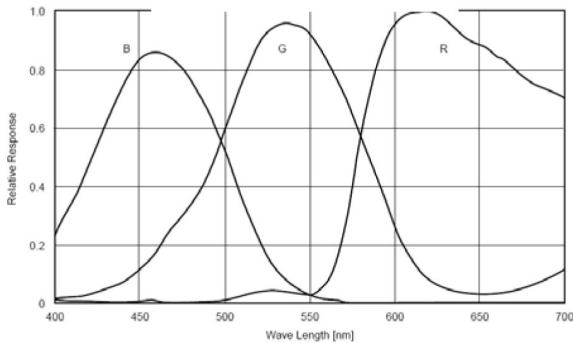- Four (4) year warranty

## Microscope Coupler
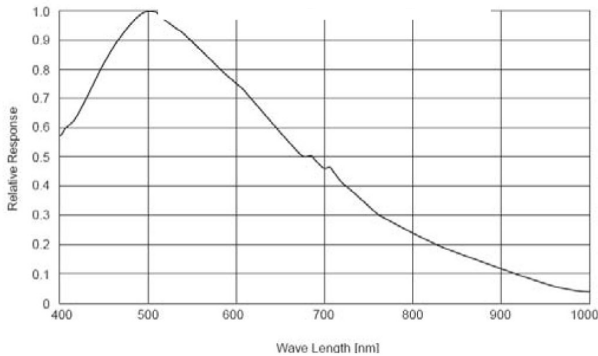
- Requires c-mount coupler

## Mechanical Drawing



## Color Quantum Efficiency Curves



## Monochrome Quantum Efficiency Curve



| Sensor Specifications | |
| --- | --- |
| Image Sensor | Sony ICX274 2.0 megapixel, CCD, color or monochrome progressive scan |
| Optical Format | 1/1.8" |
| Imager Size | Diagonal 8.92 mm |
| Pixel Size | 4.4 x 4.4 mm |
| Resolution | 1616 x 1216 |
| **Camera Specifications** | |
| Frame Rate | 12 fps at 1616 x 1216 |
| Bit Depth | 8 or 12 bit |
| Binning / Subsampling Modes | 2 x 2, 4 x 4 |
| Exposure Control | Manual and automatic control |
| Exposure Range | 50 µs to 2 seconds |
| Gain Control | Manual and automatic control |
| Gain Range | 1 to 10x |
| White Balance | Manual and automatic control |
| **Camera Characteristics** | |
| Dynamic Range | 56 dB |
| Pixel Well Depth | 7, 373 e- |
| Quantum Efficiency | 59% (mono), 43% (color) |
| Read Noise | 12 e- |
| Dark Current Noise | <1 e-/s at 21°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 |
| 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, 32 and 64-bit |
| **Power and Emissions** | |
| Power Consumption | ~2.5 W |
| Power Requirement | External 5 V DC, 3 A |
| Emissions Compliances | FCC Class BE, CE Certified |
| Hazardous Materials | RoHS, WEEE Compliant |
| Warranty | Four (4) year |
| **System Requirements** | |
| Recommended PC Specs: | • Pentium 4, 1.3 GHz or higher<br>• 512 MB RAM<br>• 60 MB hard drive free space or more<br>• USB 2.0 Port<br>• Windows 10, 8, 7, Vista, 32 and 64-bit |
| **Included In The Box** | |
| INFINITY*X-32* | 32 MP digital camera + 3m USB 2.0 cable |
| LuINFSW-DVD | DVD with INIFINITY user application software (including INFINITY ANALYZE), Twain driver and documention |
| **Ordering Information** | |
| INFINITY*X-32*C | 32 Megapixel Pixel Shifting CCD Microscopy Camera |
| INFINITY*X-32M* | 32 Megapixel Pixel Shifting Monochrome CCD Microscopy Camera |
| **Ordering options** | |
| LuSDKSW | Software Developer's Kit (Web Download) |