INFINITY3-1

1.4 Megapixel Cooled CCD USB 2.0 Camera
High Resolution Cooled CCD Color or Monochrome Microscopy Camera for Quantitative Image Analysis

Outline

INFINITY3-1 camera is designed to be used in a wide variety of scientific applications. Cooled models are ideal in low-light conditions and where high dynamic range is required. Both color and monochrome product models are available.

With 1392x1040 resolution and on-board processing, these cameras deliver outstanding image quality and value for industrial and scientific imaging applications.

Uncompressed images in live streaming video and still-image capture are provided across a USB 2.0 digital interface. No framegrabber is required.

Hardware and software based synchronization trigger is available as an option provided. On-board memory is available for frame buffering. INFINITY3-1 model cameras are offered in both enclosed and board-level form. Custom form factor (sizes) can be provided.

Every INFINITY camera includes INFINITY ANALYZE software for advanced camera control, image processing, measuring and annotation, and INFINITY CAPTURE.

All products are supported by an experienced team of software developers and application engineers. We understand your imaging needs and are here to help you with your integration and development.

Performance Features

- High-speed USB 2.0 (480Mbits/sec) interface eliminates a framegrabber and facilitates ease of installation on both laptop and desktop computers
- Available in color or monochrome
- Cooled feature reduces thermal noise during low light fluorescent imaging
- Low noise characteristic of the INFINITY3-1 progressive scan 1.4 megapixel CCD image sensor results in crisp color quality for the most demanding brightfield, phase contrast, and fluorescent applications including GFP, FISH, NIR, FRET, life science and geology
- Full color sub-windowing allows for rapid focus and scanning of samples: 15 fps at full 1392x1040 resolution
- Select 8 & 12-bit pixel data modes
- The RGB data captured through three, 12 bit channels, providing 36-bits of color image information resulting in 4096 color intensity values
- Camera control through an intuitive user TWAIN interface results in rapid image capture archiving and documentation for high throughput applications, demanding research environments and teaching facilities
- The INFINITY3-1 has a compact design equipped with a C-Mount facilitating installation on all microscope configurations including upright, inverted and stereo
- INFINITY3-1U cameras are software compatible with Windows 2K, Windows XP, Windows Vista and MAC OS 10.4 operating systems
- Full one (1) year warranty
## Specifications

**INFINITY 3-1**

### Camera Sensor

**Image Sensor**
- Sony ICX285 2/3” format, 1.4 megapixel color or monochrome progressive scan CCD sensor

**Effective Pixels**
- 1392 X 1040, 1.4 million pixels

**Frame Rate**
- 15 fps at 1392x1040, increased through binning and ROI

**Digital Output**
- 8 and 12-bit

**Dark Current (e-/s)**
- 0.15 electrons / pixel / s when cooled

**Pixel Size**
- 6.45µm X 6.45µm

**Full well capacity**
- >18,000 electrons

**Readout Noise**
- 8 e- rms

**Cooling type**
- Hermetically sealed and dry gas filled Peltier cooling to 25 degrees Celsius below ambient

**Readout Frequency**
- 28.6 MHZ

**Power Requirement**
- External 5VDC - 3amp

**Power Consumption**
- ~2.5 watts uncooled / ~8.5 watts cooled

**Operating Temperature**
- 0° C to +50° C

**Operating Humidity**
- 5%-95%, Non-condensing

**Integration Time**
- 3.5µs to 20 minutes

**Shutter**
- Global shutter

**Auto Exposure**
- Automatic / Manual

**White Balance**
- Automatic / Manual

**Gain**
- Programmable / 1 to 10X

**Interface**
- USB 2.0 high-speed interface

**Dimensions (L x W x H)**
- 3.85 x 3.5 x 2.446 inches

**Mass**
- 780g

**Binning Options**
- 2x2, 3x3, 4x4

### Applications

- Fluorescent Microscopy
- Green Fluorescent Protein Applications
- Fluorescent In Situ Hybridization
- DNA Analysis
- Live Cell Imaging
- Brightfield, Darkfield, DIC/Phase techniques
- Near IR Applications
- Histology, Pathology and Cytology
- Forensic Analysis
- Semiconductor Inspection
- Metallurgical Microscopy

### Ordering Information

- **INFINITY3-1C** - Color 1.3 MP Cooled CCD Camera
- **INFINITY3-1M** - Monochrome 1.3 MP Cooled CCD Camera
- **LuSDK** - Software Developer’s Kit and Accessories

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**Full customization available to meet your exact needs!**

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