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. 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 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 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 10, 8, 7, Vista, Mac OS X 10.7, 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

Warranty
- Four (4) year warranty

Microscope Coupler
- Requires 0.5 x C-mount coupler
Sensor Specifications

- **Image Sensor**: Micron MT9P031, CMOS, color or monochrome, progressive scan
- **Optical Format**: 1/2.5”
- **Imager Size**: Diagonal 7.13 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**: High
- **Dynamic Range**: 49 dB
- **Full Well Capacity**: 15,000 e-
- **Quantum Efficiency**: 47 % (green-peak), 62 % (mono-peak)
- **Read Noise**: 20 e-
- **Dark Current Noise**: <8 e-/s at 22 ºC

Mechanical Specifications

- **Data Interface**: USB 2.0
- **Lens Mount**: Adjustable C-mount standard
- **Dimensions**: 97.8 x 69.8 x 50.8 mm (3.85 x 2.75 x 2.00 inch)
- **Mass**: 330 g
- **Operating Temperature**: 0 to 50 ºC
- **Storage Temperature**: -30 to 70 ºC
- **Operating Humidity**: 5 to 95 %, non-condensing
- **Shock / Vibration**: 50 G shock, 5 G (2 to 200 Hz) vibration
- **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**: ~2.5 W
- **Power Requirement**: USB bus power only
- **Emissions Compliances**: FCC Class B, CE Certified
- **Hazardous Materials**: RoHS, WEEE Compliant
- **Warranty**: Four (4) year

System Requirements

- **Recommended PC Specs**:
  - Pentium 4, 1.3 GHz or higher
  - 512 MB RAM
  - 500 MB hard drive free space or more
  - USB 2.0 Port
  - Windows 10, 8, 7, Vista, Mac OS X 10.7, 32 and 64-bit

Included In The Box

- **INFINITY 1-5**: 5 MP digital camera + 3m USB 2.0 cable
- **LuINFSDVD**: DVD with INFINITY user application software (including INFINITY ANALYZE), TWAIN driver and documentation

Ordering Information

- **INFINITY 1-5C**: 5.0 MP Color CMOS Microscopy Camera
- **INFINITY 1-5M**: 5.0 MP Monochrome CMOS Microscopy Camera

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)