INFINITY 2-5
5.0 Megapixel CCD USB 2.0 Camera

High resolution CCD color or monochrome microscopy camera for qualitative image archiving

INFINITY 2-5 digital CCD USB 2.0 camera offers excellent sensitivity, high resolution and a global electronic shutter. This is an ideal camera for brightfield, darkfield, and DIC imaging applications where higher resolution archiving and a wide dynamic range are routinely required. With 2448 x 2048 resolution and onboard processing, the INFINITY 2-5 delivers outstanding image quality for a wide variety of scientific applications.

Superior Sensitivity and Color Reproduction
Years of experience in the microscopy market have allowed Lumenera to develop specialized color 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 a 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
Once the software had 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 and ImageJ plug-in are available for the INFINITY 2-5.

Superior Technical Assistance Center (TAC)
As a customer you gain access to the TAC group and knowledge base, which provide full support for cameras, software and microscopy applications.

Features
- 2/3” format progressive scan
- 5.0 megapixel CCD sensor
- Full color sub-windowing allows for rapid focus and scanning of samples; 9 fps at full 2448 x 2048 resolution, 23 fps at 640 x 480 (with ROI)
- 8 or 14-bit pixel data modes
- Software compatible with Windows 2K, Windows XP, Windows Vista, Windows 7, Mac OSX, 32 and 64-bit
- Includes TWAIN and DirectX/Direct Show support
- Optional GPI/O for control of peripherals and synchronization

Recommended Applications
- Brightfield
- Darkfield
- Live Cell Imaging
- Histology
- Pathology
- Cytology
- Defect Analysis
- Semiconductor Inspection
- Metrology
- Gel Documentation
- Quantitative Analysis

Warranty
- One (1) year parts and labor

Microscope Coupler
- Requires 1.0 x C-mount coupler
Sensor Specifications

- Image Sensor: Sony Super HAD ICX655, CCD, color or mono, progressive scan
- Optical Format: 2/3"
- Active Area: 8.7 x 7.10 mm
- Pixel Size: 3.45 x 3.45 µm
- Resolution: 2448 x 2048 pixels
- Region of Interest Control: Any multiple of 8 x 8 pixels, 16 x 16 pixels minimum

Camera Specifications

- Frame Rate: 9 fps (burst), 8.5 fps (sustained) at full resolution, 23 fps at 640 x 480 (with ROI)
- Bit Depth: 8 or 14-bit
- Binning Modes: 2 x 2, 4 x 4
- Exposure Control: Manual and automatic control
- Exposure Range: 161 µs to 500 ms (video), 161 µs - 71 min (snapshot)
- Gain Control: Manual and automatic control
- Gain Range: 1 to 25.6 x
- White Balance: Manual and automatic control

Camera Characteristics

- Sensitivity: 3.5 DN/(nJ/cm²) [at 8-bit, 1 x gains]
- Dynamic Range: 58 dB
- Full Well Capacity: 7950 e-
- Quantum Efficiency: 42 % (green peak), 52 % (mono peak)
- Read Noise: 10 e-
- Dark Current Noise: <1e -/s at 22 ºC

Mechanical Specifications

- Data Interface: USB 2.0
- Lens Mount: Adjustable C-mount standard
- Dimensions (met): 57.15 x 97.79 x 39.624 mm (enclosed)
- Dimensions (imp): 2.25 x 3.85 x 1.56 inches (enclosed)
- 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

Camera Software

- Operating Systems: Windows XP, Vista, 7, Mac OSX, 32 and 64-bit
- Power Consumption: ~2.5 W
- Power Requirement: USB bus power (external 5 V DC, 500 mA)
- Emissions Compliances: FCC Class B, CE Certified
- Hazardous Materials: RoHS, WEEE Compliant
- Warranty: One (1) 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 7
- Minimum PC Specs:
  - 600 MHz Processor
  - 256 MB of SDRAM
  - 200 MB hard drive free space
  - USB 2.0 Port
  - Windows XP

Included In The Box

- INFINITY 2-5 M 5 MP CCD Monochrome Camera
- INFINITY 2-5 C 5 MP Digital Camera for USB 2.0
- DVD with INFINITY user application software, TWAIN driver and documentation
- 2 m USB 2.0 cable

Ordering Information

- INFINITY ANALYZE MODULE
- INFINITY ANALYZE Advanced Features Module (Multi-Focus Composition and Spherical Aberration Correction Features)
- LuSDKSW-DVD Software Developer’s Kit (Web Download)
- LuSDKSW Software Developer’s Kit (DVD)
- La20515 5 V DC, 2.5 A, 12.5 W Power Supply (Optional)