INFINITY 4-11

11 Megapixel CCD USB 2.0 Camera

Large format, high-resolution scientific digital imaging for documentation and image analysis in Life Science, Clinical and Material Science Applications

INFINITY 4-11
The INFINITY4 USB 2.0 series is a large format, high resolution solution specifically designed for macro applications involving large fields of view. INFINITY 4-11 digital CCD camera is based on the Kodak KAI11002 10.7 megapixel sensor. Highlights include 3.5 frames per second at full 4008x2672 resolution, fast 60 fps through binning and ROI, and on-board processing for superior image quality with the field of view of a 35mm camera.

Superior Sensitivity and Color Reproduction
Years of experience in the microscopy market have allowed Lumenera to develop specialized color algorithms ensuring excellent color reproduction. In addition, 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 Kodak 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.

Features
- Low noise progressive scan 10.7 megapixel Kodak KAI-11002 CCD sensor
- Full color sub-windowing allows for rapid focus and scanning of samples; up to 40 fps at 640x480 resolution
- GPI/O for control of peripherals and synchronization
- 8 or 12-bit pixel data modes
- Software compatible Windows XP, Windows Vista, Windows 7, Windows 8, 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
- Two (2) year parts and labor

Microscope Coupler
- Requires 1.0 x F-mount coupler
## Sensor Specifications
- **Image Sensor**: 35 mm large format Interline Kodak KAI11002 10.7 megapixel, CCD, color or monochrome progressive scan
- **Pixel Size**: 9 x 9 µm
- **Resolution**: 4008 x 2672 pixels
- **Readout Frequency**: 32 MHz

## Camera Specifications
- **Frame Rate**: 3.5 fps, 60 with binning and ROI
- **Bit Depth**: 8 or 12-bit
- **Exposure Control**: Manual and automatic control
- **White Balance**: Manual and automatic control

## Camera Characteristics
- **Gain**: 1 to 10x programmable
- **Dynamic Range**: 65 dB
- **Binning**: 2 x 2, 3 x 3, 4 x 4
- **ROI**: User selectable through mouse and click drag

## Mechanical Specifications
- **Data Interface**: USB 2.0
- **Lens Mount**: F-Mount lens (ordered separately)
- **Dimensions**: 3.50 x 3.85 x 4.09 inch
- **Mass**: 940 g
- **Operating Temperature**: 0 to 50 ºC
- **Integration Time**: 1/5000 to 365 ms
- **Operating Humidity**: 5 to 95 %, non-condensing

## Camera Software
- **Operating Systems**: Windows XP, Windows Vista, Windows 7, Mac OSX, 32 and 64-bits

## Power and Emissions
- **Power Consumption**: ~18.7 W
- **Power Requirement**: External 12 V DC, 2 A
- **Emissions Compliances**: FCC Class B, CE Certified
- **Hazardous Materials**: RoHS, WEEE Compliant
- **Warranty**: Two (2) year

## System Requirements
- **Recommended PC Specs**:
  - Pentium 4, 1.3 GHz or higher
  - 512 MB RAM
  - 60 MB hard drive free space or more
  - USB 2.0 Port
  - Windows 7
- **Minimum PC Specs**:
  - 600 MHz Processor
  - 256 MB of SDRAM
  - 20 MB hard drive free space
  - USB 2.0 Port
  - Windows XP

## Included In The Box
- INFINITY4-11 10.7 MP digital Camera for USB 2.0
- LuINFSW-DVD DVD with INFINITY user application software (including INFINITY ANALYZE), Twain driver and documentation
- Lu802 2 m USB 2.0 Cable

## Ordering Information
- **INFINITY4-11CB**: 10.7 MP Large Format Color CCD Microscopy Camera
- **INFINITY4-11MB**: 10.7 MP Large Format Monochrome CCD Microscopy Camera
- **Lu9019-XX**: Large-Format Custom Coupler - please refer to the coupler datasheet for part numbers and ordering information

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**Ordering options**

<table>
<thead>
<tr>
<th>Package</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>INFINITY ANALYZE MODULE</strong></td>
<td>INFINITY ANALYZE advanced Features Module (Multi-Focus Composition and Spherical Aberration Correction Features)</td>
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<tr>
<td>LuSDKSW</td>
<td>Software Developer's Kit (Web Download)</td>
</tr>
<tr>
<td>LuSDKSW-DVD</td>
<td>Software Developer's Kit (DVD)</td>
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<tr>
<td>Power Supply</td>
<td>5 V DC, 2.5 A, 12.5 W Power Supply (Optional)</td>
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