

INFINITY5-5

5.1 Megapixel Global Shutter CMOS Microscope Camera

High performance microscope camera for a wide range of applications – with dual output to HDMI and USB 3



INFINITY5-5

Teledyne Lumenera's INFINITY5-5 is a high quality 5 megapixel microscopy camera that provides high speeds at high resolution. The INFINITY5-5 is based on the Sony® Pregius™ global shutter CMOS sensor that rivals sCMOS technology. With fast focusing at high frame rates of up to 75 frames per second, the INFINITY5-5 performs in a wide range of applications.

The INFINITY5-5's 2/3 inch sensor format accommodates a 2464 x 2056 resolution with 3.45 micron pixels. The HDMI output allows the INFINITY5-5 to connect to both a computer and HDMI TV or monitor for applications where knowledge sharing is critical.

Simultaneous Live Viewing on Computer and HDMI Monitor

Operate the camera by directly connecting to an HDMI monitor, or connect the camera to a PC or Mac via USB 3 for image preview and capture. Use the soft-touch response buttons to control the camera with or without connection to a computer.

Ready to Perform

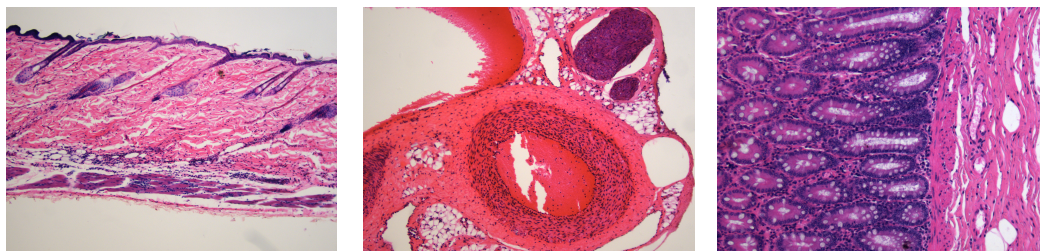
The INFINITY5-5 comes ready to perform with cables (USB and HDMI), power supply, and INFINITY CAPTURE software for routine imaging needs, including camera setting adjustments, live preview, image capture, and video clips. The INFINITY5-5 also provides third-party interoperability with MetaMorph and Micro-Manager microscopy software, MatLab systems engineering software, LabView analysis software, and TWAIN and DirectShow interfaces.

Accurate Color

Teledyne Lumenera's specialized algorithms ensure accurate color reproduction that results in a sample preview on a monitor that matches the view in the microscope eyepiece.

Guaranteed Quality

Teledyne Lumenera provides an industry-leading, full four-year year warranty on all microscopy cameras.

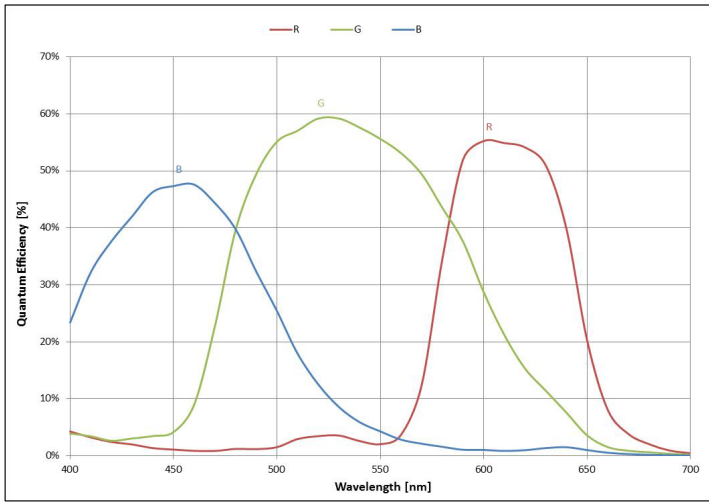


Features

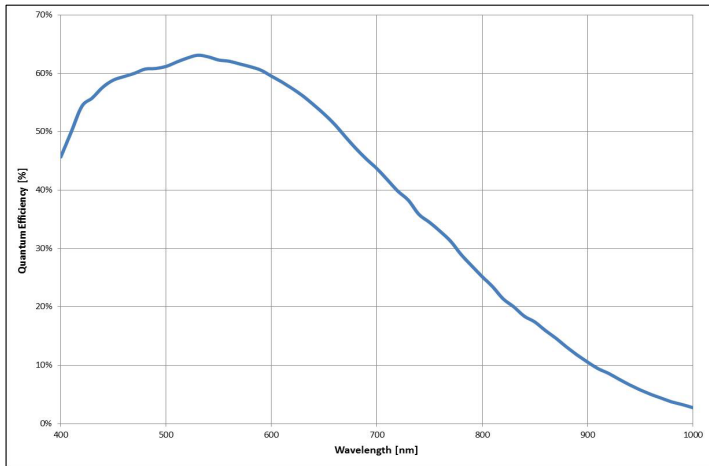
- Sony Pregius global shutter sensor technology
- Color or monochrome IMX250 Global Shutter CMOS sensor with 2/3" optical format providing a resolution of 2464 x 2056 using 3.45 x 3.45µm pixels
- Fast frame rates at ~75 fps at full resolution in 8-bit
- Simultaneous output to USB 3 and HDMI compatible monitor
- Intuitive on-camera buttons for power, white balance and image capture
- Selectable 8 or 12-bit pixel data
- High-speed USB 3.1 Gen 1 interface for fast image delivery and simplified connectivity. USB 2.0 supported.
- Software compatible with Windows 10, Windows 8.1, Windows 7, MAC OS X 10.13, 32 and 64-bit operating systems
- Support for third-party capture and analysis applications: MetaMorph and Micro-Manager
- Recommended coupler: 0.6x - 0.7x



Color Quantum Efficiency



Monochrome Quantum Efficiency



Ordering Information

| | |
|-------------------------|--|
| INFINITY 5-5C | 5.1 MP CMOS Color USB 3.1 Gen 1 Camera |
| INFINITY 5-5M | 5.1 MP CMOS Mono USB 3.1 Gen 1 Camera |
| 5YR Protection Plan - 2 | 5-Year Extended Warranty with Advanced Replacement |
| La050315 | Transformer, 5VDC, 15W, 3A, International |
| La2000PAFL | GPIO cable with leads |
| La2030HD | 3m HDMI Cable |
| INFINITY-HD-WT | IOGEAR Wireless Transmitter and Receiver kit |

Sensor Specifications

| | |
|----------------------------|--------------------------------------|
| Image Sensor | SONY IMX250 CMOS color or monochrome |
| Optical Format | 2/3" |
| Imager Size | Diagonal 11.1 mm |
| Pixel Size | 3.45 x 3.45 μ m |
| Resolution | 2464 x 2056 pixels |
| Region of Interest Control | Yes |

Camera Specifications

| | |
|------------------|---|
| Max Frame Rate | 1080P60 (~75 fps at full resolution) in 8-bit |
| Bit Depth | 8 or 12-bit |
| Binning Modes | 2 x 2 for mono |
| Exposure Control | Manual and automatic control |
| Exposure Range | 42 μ s to 59.5m (snapshot); 14 μ s to 14s (video) |
| Gain Control | Manual and automatic control |
| Gain Range | ~1 to 16 x |
| White Balance | Manual and automatic control |
| Trigger Modes | Hardware and software triggerable |

Camera Characteristics

| | |
|---------------------|---|
| Sensitivity (8-bit) | Mono: 4.9 DN/(nJ/cm ²), Color: 4.3 DN/(nJ/cm ²) (Global and channel gains at unity) |
| Dynamic Range | ~72 dB |
| Full Well Depth | ~10,500 e ⁻ |
| Quantum Efficiency | 59% @ 530nm (color), 63% @ 530nm (mono) |
| Read Noise | ~2.30 e ⁻ |
| Dark Current | 1.0 e ⁻ /s (at 22 °C ambient, 35 °C internal camera) |

Mechanical Specifications

| | |
|-----------------------|-------------------------------------|
| Data Interface | USB 3 connector, HDMI output |
| General Purpose I/O | Locking Hirose MXR-8R-8SA(71) |
| Lens Mount | Adjustable C-Mount |
| Dimensions | 3.85 x 2.75 X 2.00 inch |
| Mass | 330 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 (2-200Hz) Vibration |

Camera Software

| | |
|---------------------------------|---|
| Operating Systems | Windows 10, Windows 8.1, Windows 7, MAC OS X 10.13, 32 and 64-bit operating systems |
| Third Party Software Interfaces | MicroManager, MetaMorph, MatLab, LabView, DirectShow, TWAIN |

Power and Emissions

| | |
|-----------------------|---|
| Power Consumption | ~4W |
| Power Requirement | External 5 V DC, 1.2 A, power supply (included) |
| Emissions Compliances | FCC and CE Certified |
| Hazardous Materials | RoHS, WEEE Compliant |
| Warranty | Four (4) years |

Included In The Box

| | |
|--------------|---|
| INFINITY 5-5 | 5.1 MP digital camera with 3m USB 3 cable |
| La050315 | Transformer, 5VDC, 15W, 3A, International |
| La2030HD | 3m HDMI Cable |

Mechanical Drawing

