Lt225

2.2 Megapixel High-Speed CMOS Camera with SuperSpeed USB 3.0

High Resolution CMOS Sensor with Global Shutter

Lumenera's Lt225 enclosed digital camera is built for rugged 24/7 use. A proven high resolution 2/3" CMOS sensor with a fully electronic global shutter that captures excellent quality, high-speed images with zero blur. The industrial-grade version of this camera is ideally suited for applications that include traffic monitoring, Automatic License/Number Plate Recognition (ALPR/ANPR), high-speed inspection, light UAVs and motion control. This camera can be customized to suit OEM designs and is available in a scientific-grade.

High Quality Images at High Speed

The Lt225 was created for speed using latest the USB 3.0 technology to ensure fast image delivery even at its largest resolution. Image captures can be synchronized using either a hardware or software trigger, and are complemented by 128 MB of onboard memory that is used for frame buffering to ensure reliable image delivery.

Plug-and-Play with No Framegrabber

The compact, lightweight design of this camera, measuring 43 x 43 x 55 mm, ensures easy integration into tight spaces and enclosures. The fully locking USB 3.0 cabling and digital interface ensure a simple plug-and-play installation. No framegrabber is required. Simplified I/O cabling is provided through a locking Hirose connector supporting external power input along with 1 optically isolated output, 1 optically isolated input and 2 configurable I/O ports.

Maximize Camera Performance Within Your Own Application

The Lumenera Camera SDK provides a full suite of features and functions that allow you to maximize the camera's performance within your own vision application. The SDK is compatible with all of our USB and GigE-based cameras. Microsoft DirectX/DirectShow, Windows API and .NET API interfaces are provided, allowing you the choice of application development environments from C/C++ to VB.NET or C#.NET.

Superior Technical Assistance Center

All Lumenera cameras are supported by an experienced team of technical support and imaging experts. We understand your imaging needs and are here to help you get the most out of your camera.

Features

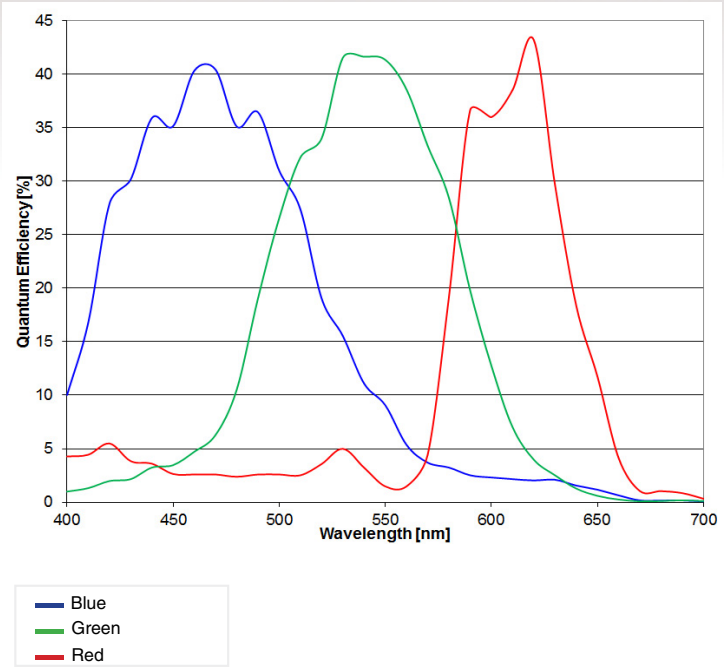
- Industry proven CMOSIS CMV2000 Rev3 CMOS 2.2 megapixel sensor with electronic global shutter
- SuperSpeed USB 3.0 interface for fast image delivery and simplified connectivity
- Compact, robust form factor measuring 43 x 43 x 55 mm with 16 mounting points and 1 tripod (1/4"-20) mount
- 170 fps at full resolution
- Color or monochrome CMOS sensor with 2/3" optical format providing a resolution of 2048 x 1088 using 5.5 μm^2 pixels
- Locking industrial micro USB and Hirose GPI/O connector for power as well as control of peripherals and synchronization of lighting
- 4 GPI/O: 1 optically isolated output, 1 optically isolated input and 2 configurable I/O ports
- 128 MB RAM used for frame buffering
- Simplified cabling – video, power and full camera control over a single micro USB 3.0 cable
- Region of Interest (ROI) options improve sensitivity and provide higher frame rates
- Select 8 or 12-bit pixel data
- FCC Class B, CE Certified
- DirectShow compatible
- Software compatible with Windows 10, Windows 8.1, Windows 7, Linux, 32 and 64-bit operating systems
- Complete Windows and Linux SDKs available
- Four (4) year warranty

Lumenera corporation

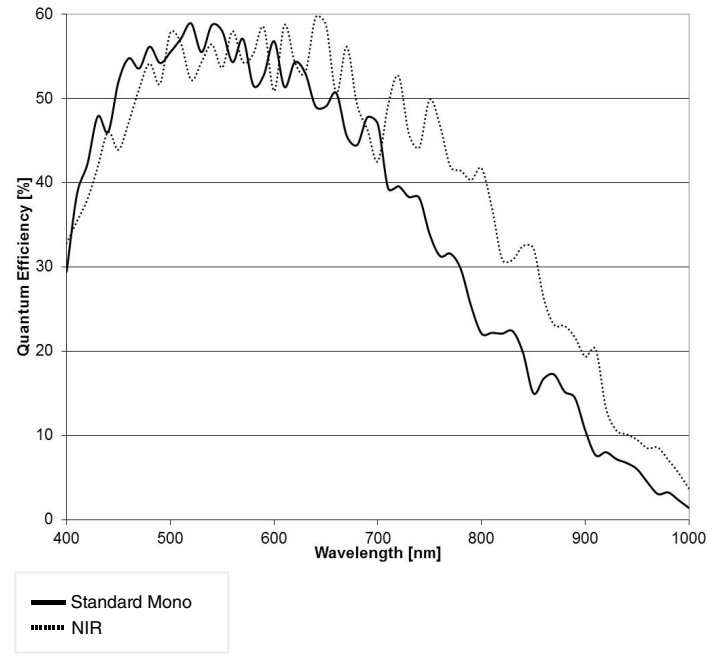
7 CAPELLA COURT, OTTAWA, ON, CANADA K2E 8A7 | TEL (613) 736-4077 | FAX (613) 736-4071 | WWW.LUMENERA.COM | INFO@LUMENERA.COM

09202016

Color Quantum Efficiency Curves



Monochrome and NIR Quantum Efficiency Curves

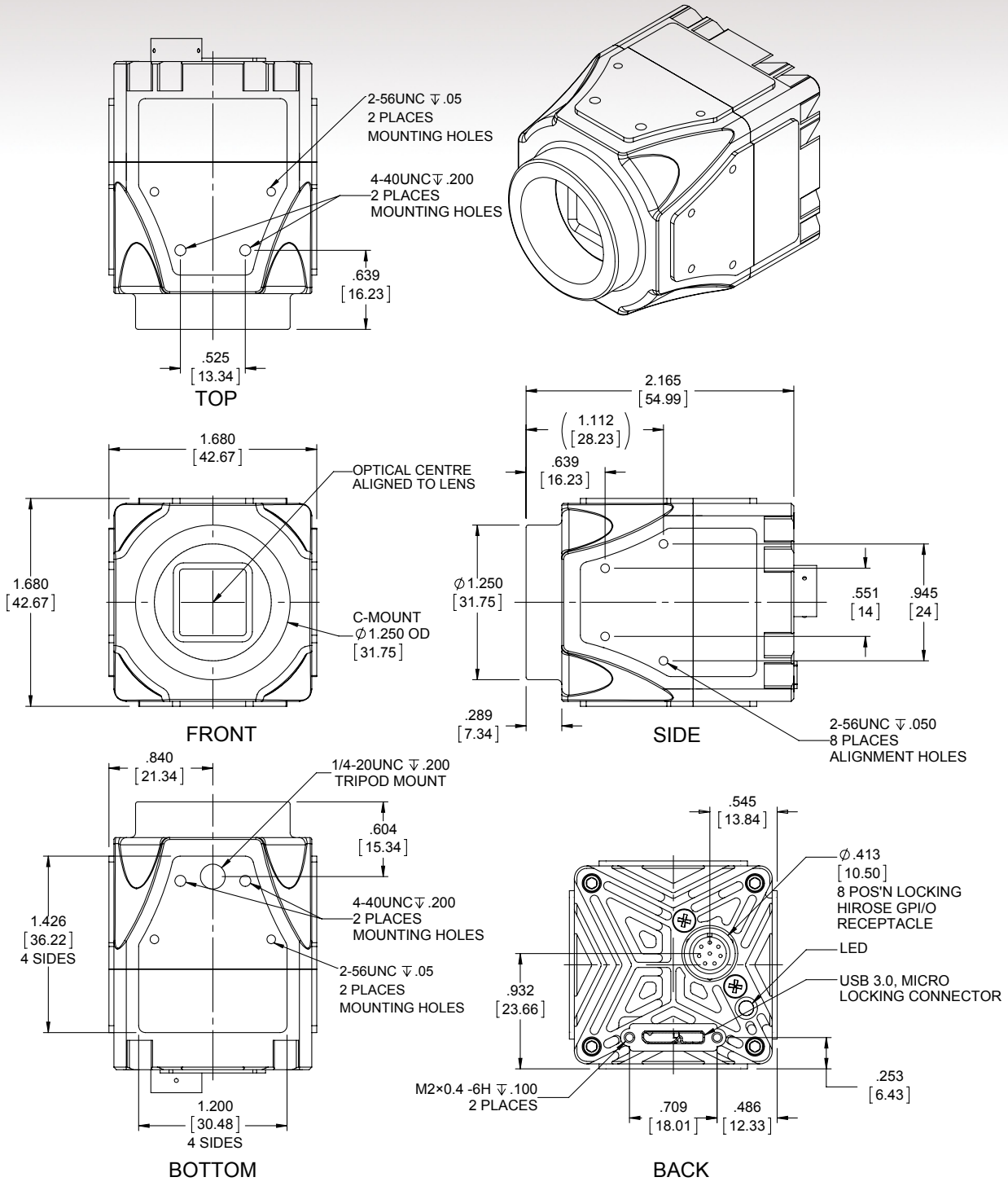


Sensor Specifications	
Image Sensor	CMOSIS CMV2000 Rev3, color, monochrome, NIR
Optical Format	2/3" (recommend 1" lens)
Imager Size	Diagonal 12.76 mm
Pixel Size	5.5 x 5.5 µm
Resolution	2048 x 1088 pixels
Region of Interest Control	Any multiple of 8 x 8
Camera Specifications	
Frame Rate	170 fps at full resolution
Bit Depth	8 or 12-bit
Binning Modes	N/A
Exposure Control	Manual and automatic control
Exposure Range	26 µs to 4000 ms
Gain Control	Manual and automatic control
Gain Range Analog	1.0 to 3.2 x analog
Gain Range Extended*	1.0 to 33.2 x (mono), 1.0 to 8.3 x (colour)
White Balance	Manual and automatic control
Trigger Modes	Hardware and software triggerable
Camera Characteristics	
Sensitivity (at 550 nm)	13.7 DN/(nJ/cm²) [mono], 10.1 DN/(nJ/cm²) [color] (@ 8-bit, 1x gain)
Dynamic Range	56.4 dB
Full Well Capacity	8,600 e-
Quantum Efficiency	43% peak color, 59% peak monochrome
Read Noise	13 e-
Dark Current Noise	125 e-/s (@25 °C die temp)
Mechanical Specifications	
Data Interface	USB 3.0, micro locking connector
General Purpose I/O	Locking Hirose MXR-8R-8SA(71)
Lens Mount	C-Mount
Dimensions	43 x 43 x 55 mm
Mass	138 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 to 200 Hz) vibration
Onboard Memory	Camera has onboard non-volatile memory storage
Camera Software	
Operating Systems	Windows 10, Windows 8.1, Windows 7, Linux, 32 and 64-bit operating systems
Software Interfaces	DirectShow
Power and Emissions	
Power Consumption	5 V DC @ 700 mA, ~3.5 W
Power Requirement	USB bus power (optional 5 V DC, 700 mA minimum, power through Hirose)
Emissions Compliances	FCC Class B, CE Certified
Hazardous Materials	RoHS, WEEE Compliant
Warranty	Four (4) year
Ordering Options	
Lt225M	2.2 MP Monochrome Camera (Enclosed)
Lt225C	2.2 MP Color Camera (Enclosed)
Lt225M-NIR	2.2 MP NIR Camera (Enclosed)
LuSDK	Software Developer's Kit (Web Download)
Customization Options	
-SCI	Scientific grade
-WOIR	AR/AR glass within lens mount
-WOG	Without any glass within lens mount
-WOCG	Without any cover glass on the camera sensor

**Extended gain is a combination of analog and digital gain.*

Lumenera corporation
7 CAPELLA COURT, OTTAWA, ON, CANADA K2E 8A7 | TEL (613) 736-4077 | FAX (613) 736-4071 | WWW.LUMENERA.COM | INFO@LUMENERA.COM

09202016



ALL DIMENSIONS DISPLAYED AS INCHES [MM]

7 CAPELLA COURT, OTTAWA, ON, CANADA K2E 8A7 | TEL (613) 736-4077 | FAX (613) 736-4071 | WWW.LUMENERA.COM | INFO@LUMENERA.COM

09202016