Lu170 & Lu175

1.3 Megapixel USB 2.0 Camera

High Resolution Images

Lumenera's Lu170 and Lu175 series of monochrome megapixel cameras are designed to be used in a wide variety of industrial and scientific applications. With 1280 x 1024 resolution and on-board processing these cameras deliver outstanding image quality and value for applications requiring high resolution and modest cost.

Live Stream and Still Image Capturing

Uncompressed images in live streaming video and still image capture are provided across a USB 2.0 digital interface. No framegrabber is required. Advanced camera control is available through a complete Software Developer's Kit, with sample code available to quickly integrate camera functions into OEM applications.

Customizable Form Factors

Hardware and software based synchronization trigger is provided standard. Camera models are offered in both enclosed (Lu175) and board-level (Lu170) form. Custom form factor (sizes) as well as color and monochrome camera models are available.

Application

The Lumenera Camera SDK provides a full suite of features and functions that allow you to maximize the performance of your camera within your application. The SDK is compatible with all 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. Full inline IntelliSense autocompletion and documentation is provided with the .NET API interface and is accompanied by a full API manual describing all the camera functions and properties.

Features

- Lower fixed pattern noise
- Stable, reliable camera drivers for running multiple cameras on a PC or other USB devices
- Monochrome, progressive scan, 1.3 megapixel image sensor
- 30 fps at full 1280 x 1024 resolution
  100 fps at 640 x 480 resolution
- Faster frame rates with reduced region of interest
- Auto white balance, auto exposure
- Snapshot mode for use with strobe
- GPI/Os for control of peripherals and synchronization of lighting (4in/4out)
- FCC Class B, CE Ready
- RGB Bayer video output
- Select 8 or 10-bit pixel data
- Simplified cabling - video, power and full camera control over a single USB cable
- C-mount provided
- DirectShow compatible
- USB cameras are software compatible with
- Software compatible with Windows 10, Windows 8.1, Windows 7, Linux, 32 and 64-bit operating systems
- Complete SDK available
- Four (4) year warranty

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

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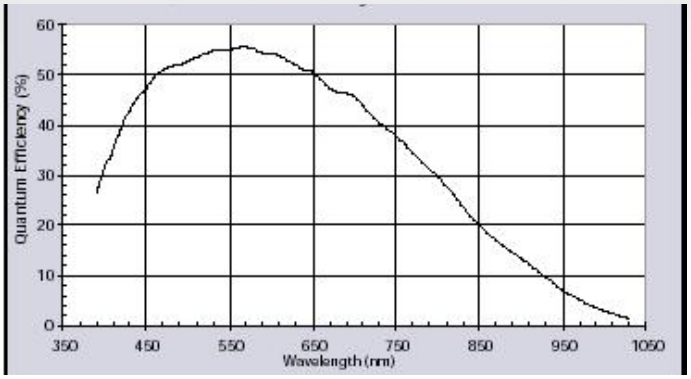
Monochrome Quantum Efficiency Curve



Ordering Options	
Lu170M	1.3 Megapixel Monochrome Module (Board Level)
Lu175M	1.3 Megapixel Enclosed Monochrome Camera
LuSDK	Software Developer's Kit (Web download)
La20606	6 V DC power supply
Camera Includes	
Lu802	2M USB 2.0 A to B cable
Customization Options	
-WOIR	Without IR Cut Filter (in optical path)
-CS	With Adjustable CS-mount lens mount
-ADJ	Adjustable lens mount
-WOG	No glass
-IO access	Color

Sensor Specifications	
Image Sensor	Micron MT9M001, CMOS, mono progressive scan
Optical Format	1/2"
Active Area	6.66 x 5.32 mm
Pixel Size	5.2 x 5.2 um
Resolution	1280 x 1024 pixels
Region of Interest Control	User selectable
Camera Specifications	
Frame Rate	30 fps @ 1280x1024
Bit Depth	8 or 10-bits
Binning Modes	2 x 2 and 4 x 4
Exposure Control	Manual and automatic control
Exposure Range	64 us to 8.31 ms (video), 0 to 4.16 seconds (snap-shot)
Gain Control	Manual
Gain Range	1 to 15.0 X
White Balance	Manual and automatic control
Camera Characteristics	
Sensitivity	1.8 V / Lux sec
Dynamic Range	60 dB
Full Well Capactiy	40,000 e-
Quantum Efficiency	55%
Read Noise	10 e-
Dark Current Noise	20 e-/s @25 °C
Mechanical Specifications	
Data Interface	Standard USB cable
Lens Mount	Adjustable C-mount standard, (CS-mount option)
Dimensions (HxWxD)	39.62 x 57.15 x 96.52 mm (enclosed) 1.56 x 2.25 x 3.8 inch (enclosed)
Mass	300 g (enclosed)
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	Windows API, .NET, DirectX
Power and Emissions	
Power Consumption	~3 W
Power Requirement	USB bus power, or external 6 V DC, 500 mA
Emissions Compliances	FCC Class BE, 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 • 60 MB hard drive free space or more • USB 2.0 Port • Windows 10, 8.1, 7; Linux

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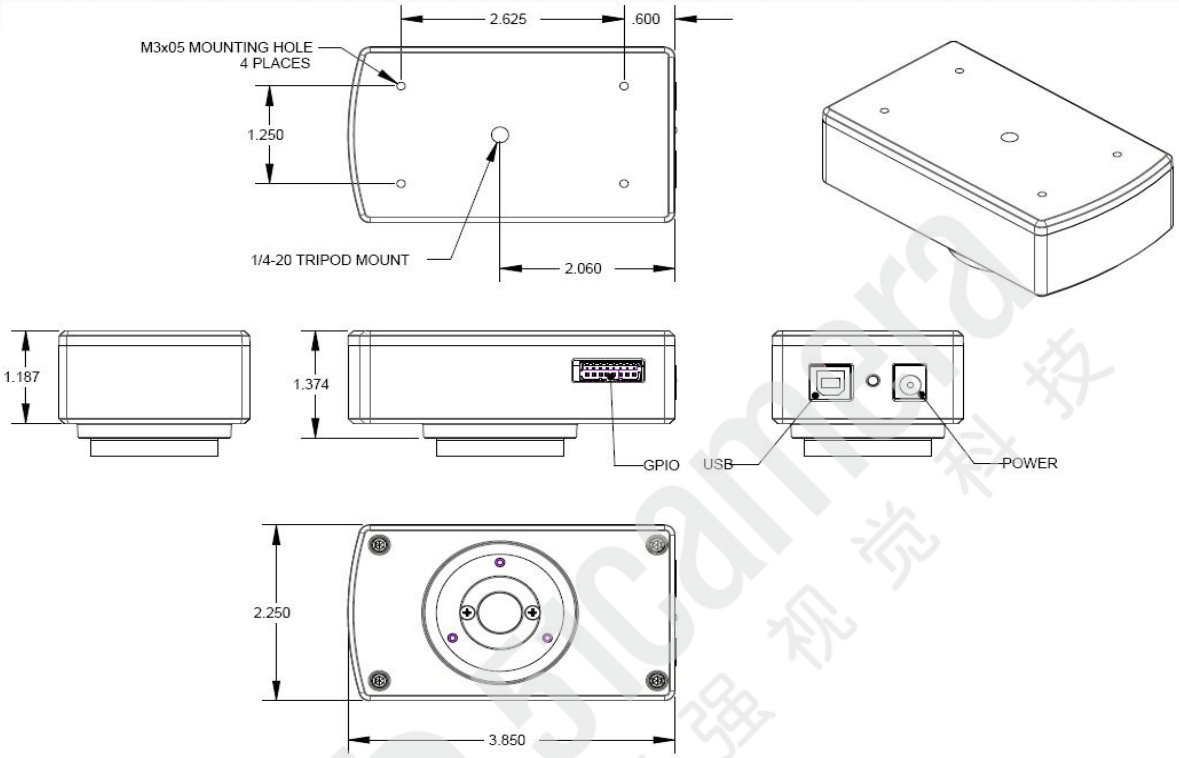
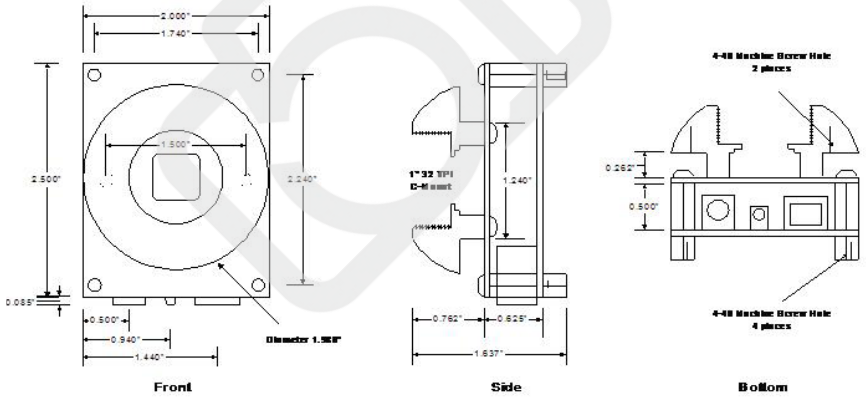
Enclosed Mechanical Drawings



Board Level Mechanical Drawings



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