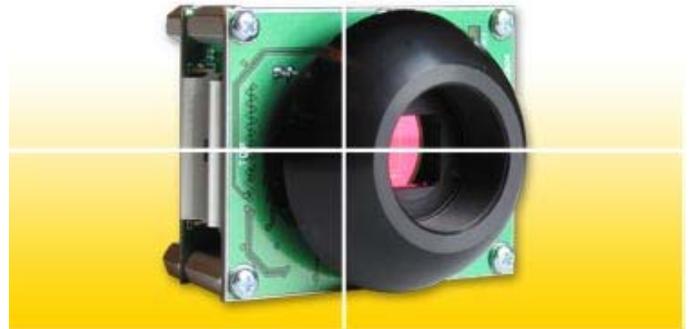# Lumenera corporation

Lu170
Lu175

1.3 Megapixel USB 2.0 Camera

Outline

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 1280x1024 resolution and on-board processing these cameras deliver outstanding image quality and value for applications requiring high resolution and modest cost.

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 (SDK), with sample code available to quickly integrate camera functions into OEM applications.

Hardware and software based synchronization trigger is provided standard. Enclosed (Lu175), board-level (Lu170), and monochrome (only) variants available. Custom form factor (sizes) can also be provided.

All Lumenera products are supported by an experienced team of software developers and application engineers. We understand your imaging needs and are here to help you with your integration and development. Lumenera's cameras include a full one (1) year warranty.

Performance 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**

❑ **High-speed USB 2.0 (480Mbits/sec)**

❑ **30 fps at full 1280x1024 resolution
100 fps at 640x480 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 Windows™2K, Windows XP and Windows Vista 32 and 64-bit operating systems**

❑ **Complete SDK available**

Lumenera Corporation • 7 Capella Court, Ottawa ON, Canada K2E 8A7 • (t) 1.613.736.4077 • (f) 1.613.736.4071 • www.lumenera.com

Specifications   Lu170/Lu175

Image Sensor	**1/2" format, mono, 6.6mm x 5.3mm array**
Effective Pixels	**1280 x 1024, 5.2µm square pixels**
Frame Rate	**30 fps at 1280x1024, 100fps at 640x480**
Sensitivity	**High**
Dynamic Range	**60dB**
Auto Exposure	**Automatic / Manual**
White Balance	**Automatic / Manual**
Dimensions (W x H x D)	**2.00 x 2.50 x 1.63 inches (board level)**
	2.25 x 3.85 x 1.56 inches (enclosed)
Mass	**~150g / 300g**
Power Requirement	**USB bus power, or external 6VDC, 500mA**
Power Consumption	**~3.0 Watts**
Operating Temperature	**0°C to +50°C**
Operating Humidity	**5% - 95%, Non-condensing**
Interface Connector	**Standard USB**
Lens Mount (Lens not included)	**C-Mount (CS-Mount option)**
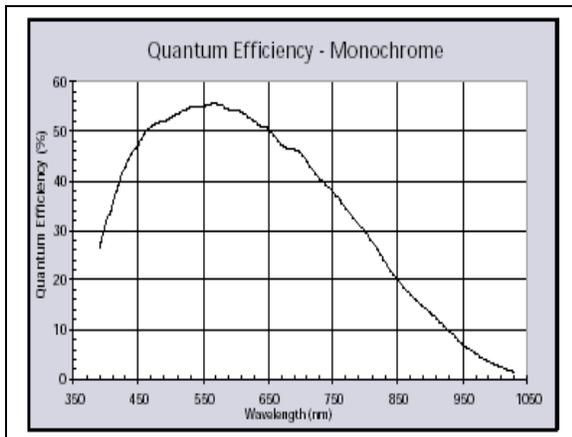
Ordering Information

Lu170M   - Monochrome Camera Module

Lu175M   - Enclosed Monochrome Camera

LuSDK   - Software Developer's Kit

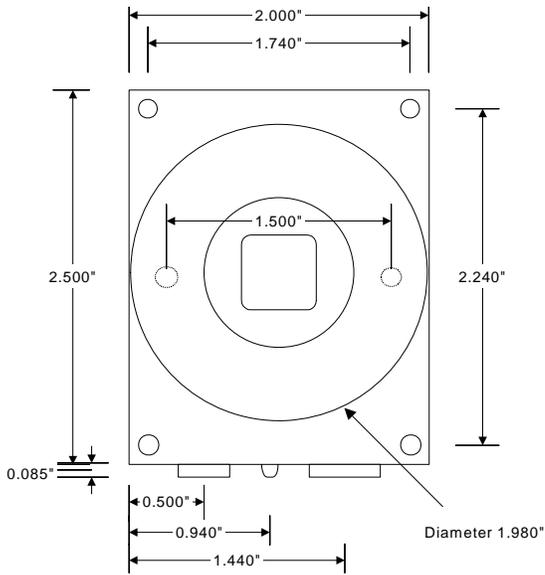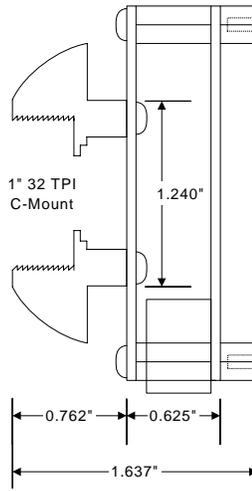### *Full customization available to meet your exact needs!*

Available Options:
Without Standard IR-Cut Filter
Without Glass
Without Mount
Board Level
Adjustable CS-Mount

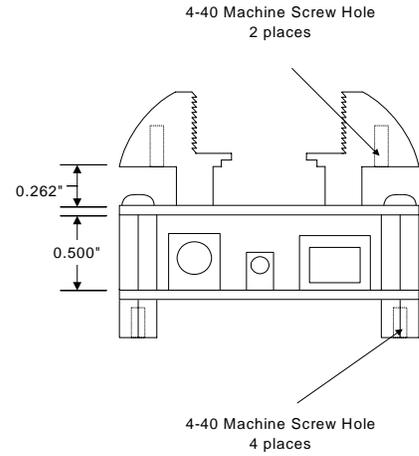Contact us for more specific details.

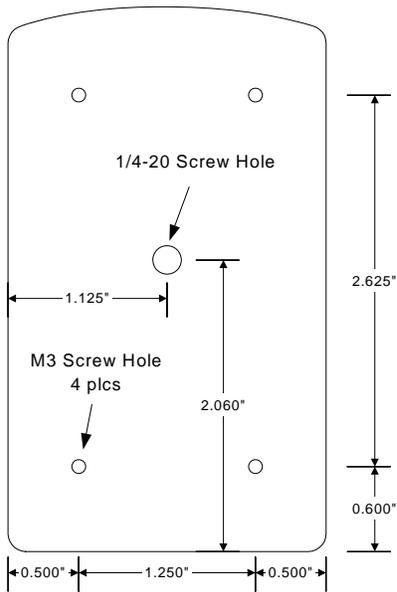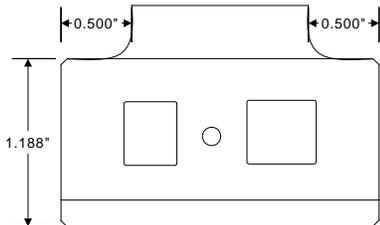Lumenera Corporation • 7 Capella Court, Ottawa ON, Canada K2E 8A7 • (t) 1.613.736.4077 • (f) 1.613.736.4071 • www.lumenera.com

OEM Board-Level Camera

2.000"
1.740"
1.500"
2.500"
2.240"
0.085"
0.500"
0.940"
1.440"
Diameter 1.980"

Front

1" 32 TPI C-Mount
1.240"
0.762"
0.625"
1.637"

Side

4-40 Machine Screw Hole
2 places
0.262"
0.500"
4-40 Machine Screw Hole
4 places

Bottom

Enclosed Camera

Back

1/4-20 Screw Hole
1.125"
M3 Screw Hole
4 plcs
2.625"
2.060"
0.600"
0.500"
1.250"
0.500"

Side

1.250"
1.435"
1.188"
1.563"

Front

3.850"
2.250"

Bottom

0.500"
0.500"
1.188"
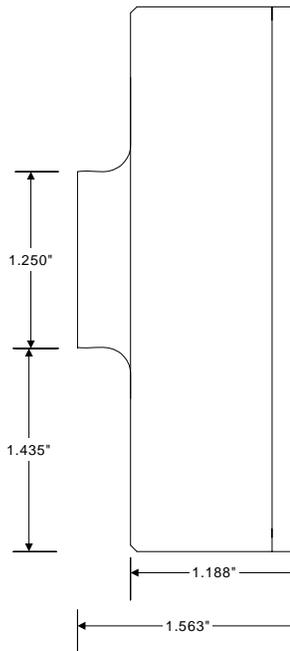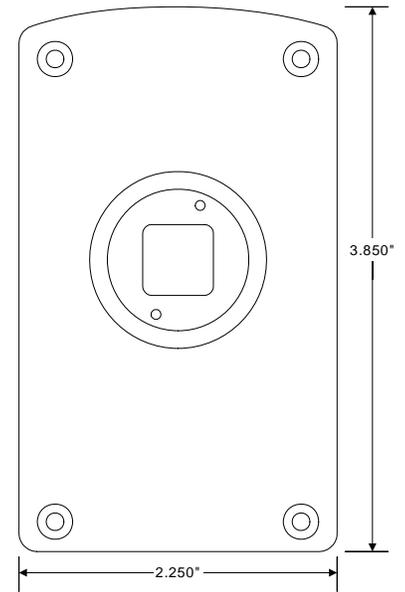
* Anodized aluminum, std color - black