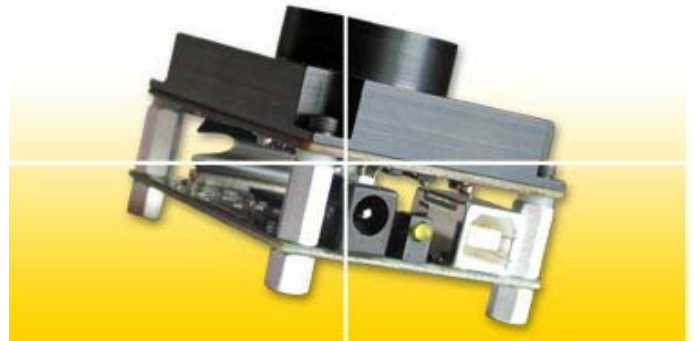# Lumenera corporation

Lu160

1.4 Megapixel USB 2.0 Camera

Outline

Lumenera's Lu160 series of megapixel cameras are designed to be used in a wide variety of applications, particularly in low-light conditions and where high dynamic range is required. Both color and monochrome product models are available.

With 1392x1040 resolution and on-board processing these cameras deliver outstanding image quality and value for industrial and scientific imaging applications.

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.

Hardware and software based synchronization trigger is provided standard. Lu160 model cameras are offered in both enclosed and board-level form. Custom form factor (sizes) can 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. Products come with a full one (1) year warranty.

Performance Features

❑ **Highest quality CCD sensor**

❑ **Excellent sensitivity with high color fidelity**

❑ **Color or Monochrome, Interline transfer Progressive scan CCD, 1.4 Megapixel sensor**

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

❑ **15 fps at full 1392x1040 resolution 30 fps 640x480 (binned)**

❑ **Binning and Region of Interest (ROI) options improve sensitivity and provide higher frame rates**

❑ **Global shutter for capturing fast moving objects**

❑ **GPI/Os for control of peripherals and synchronization of lighting (4in/4out)**

❑ **FCC Class B, CE Ready**

❑ **Select 8 or 12-bit pixel data**

❑ **Simplified cabling - video and full camera control over a single USB cable**

❑ **C-Mount provided**

❑ **DirectShow compatible**

❑ **USB cameras are software compatible with Windows™ 98 SE, Windows ME, Windows 2K and Windows XP 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   Lu160

Image Sensor	**2/3" format, color or mono, 10.2mm x 8.3mm array**
Effective Pixels	**1392 x 1040, 6.45um square pixels**
Frame Rate	**15 fps at 1392 x 1040, 30 fps at 640x480 (binned or ROI)**
Sensitivity	**Extremely High**
Dynamic Range	**66dB**
Exposure	**Manual**
White Balance	**Auto / 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 with enclosure**
Power Requirement	**External 6VDC, 800mA (included)**
Power Consumption	**~4 Watts**
Operating Temperature	**0°C to +50°C**
Operating Humidity	**0% - 95%, Non-condensing**
Interface Connector	**Standard USB**
Lens Mount (Lens not included)	**C-Mount (CS-Mount option)**
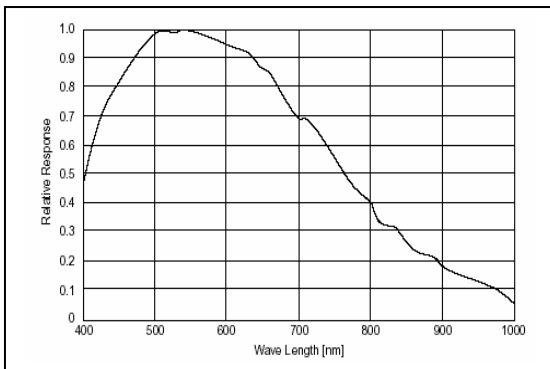
Monochrome Response
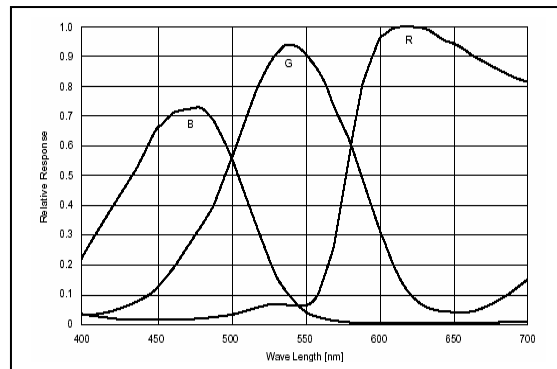
Color Response

Full customization available to meet your exact needs!

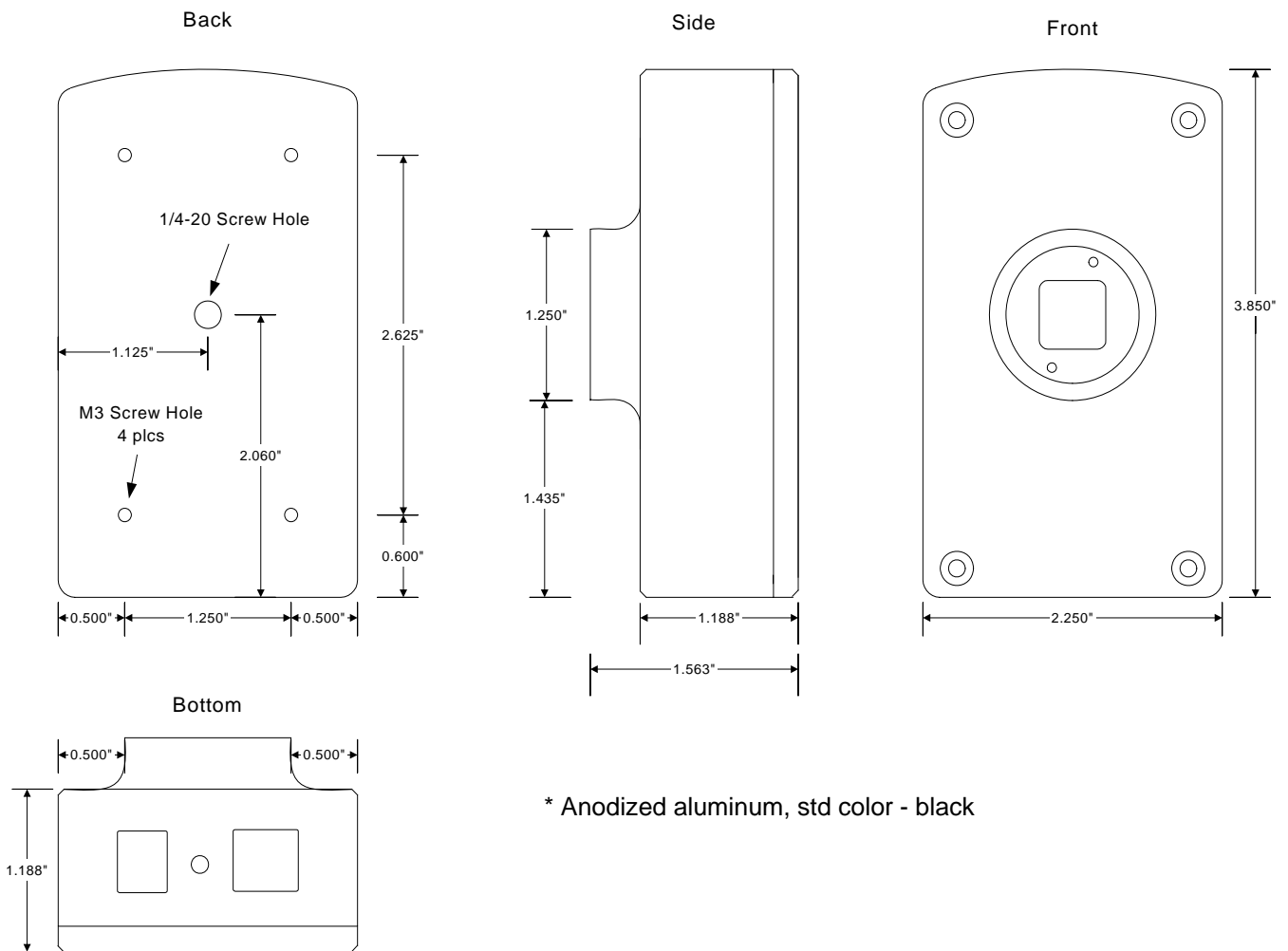### *Ordering Information*

Lu160M	– Monochrome Camera Module
Lu160C	– Color Camera Module
Lu165M	– Enclosed Monochrome Camera
Lu165C	– Enclosed Color Camera
LuSDK	– Software Developer's Kit

OEM Board-Level Camera

2.000"
1.740"
4-40 Hex
Cap Screw
2.500"
2.240"
0.500"
0.085"
0.500"
0.940"
1.440"
0.266"

1.250"
1" 32 TPI
C-Mount
0.815"   0.625"
1.680"

0.375"
0.440"
0.500"
4-40 Machine Screw Hole
4 places

Front   Side   Bottom

Enclosed Camera

Back   Side   Front

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

1.250"
1.435"
1.188"
1.563"

3.850"
2.250"

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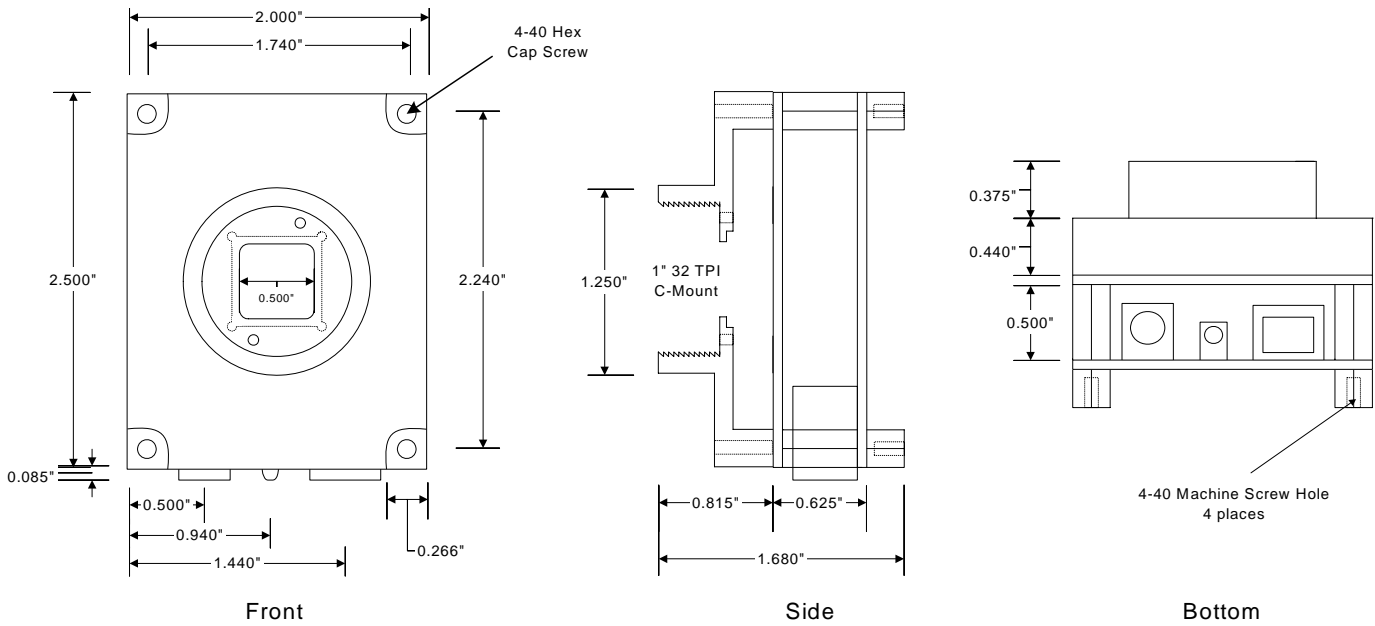
* Anodized aluminum, std color - black

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