

**1.4 Megapixel USB 2.0 Camera**

## Outline

Lumenera Lu160 and Lu165 megapixel cameras are designed for use in a wide variety of applications, particularly in low-light conditions and where high dynamic range is required.

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

Hardware and software based synchronization trigger is provided standard. These camera models are available enclosed (Lu165) or board-level (Lu160). Color and monochrome product models are available as well as custom form factors.

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.

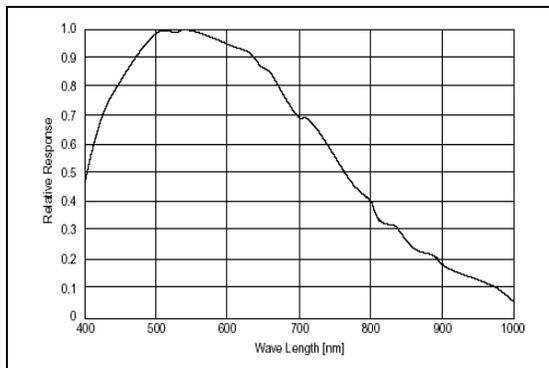
## Performance Features

- 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 (480Mbps/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 XP and Windows Vista and Windows 7, 32 and 64-bit operating systems**
- Complete SDK available**
- Full one (1) year warranty**

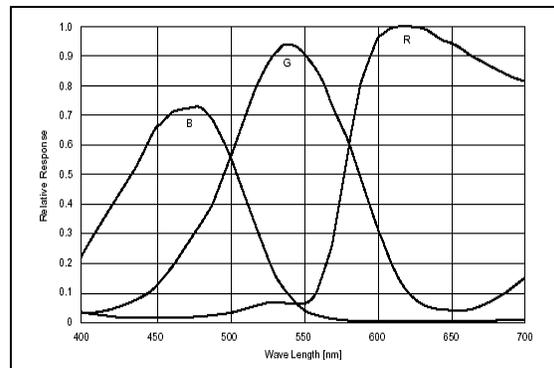
# Specifications

# Lu160 / Lu165

Image Sensor	<b>2/3" format, color or mono, 9.0mm x 6.7mm array</b>
Effective Pixels	<b>1392 x 1040, 6.45um square pixels</b>
Frame Rate	<b>15 fps at 1392 x 1040, 30 fps at 640x480 (binned or ROI)</b>
Sensitivity	<b>Extremely High</b>
Dynamic Range	<b>66dB</b>
Exposure	<b>Manual</b>
White Balance	<b>Auto / Manual</b>
Dimensions (W x H x D)	<b>2.00 x 2.50 x 1.63 inches (board level) 2.25 x 3.85 x 1.56 inches (enclosed)</b>
Mass	<b>~150g / 300g with enclosure</b>
Power Requirement	<b>USB bus, optional external 6VDC, 800mA (not included)</b>
Power Consumption	<b>~4 Watts</b>
Operating Temperature	<b>0°C to +50°C</b>
Operating Humidity	<b>0% - 95%, Non-condensing</b>
Interface Connector	<b>Standard USB</b>
Lens Mount (Lens not included)	<b>C-Mount (CS-Mount option)</b>



Monochrome Response



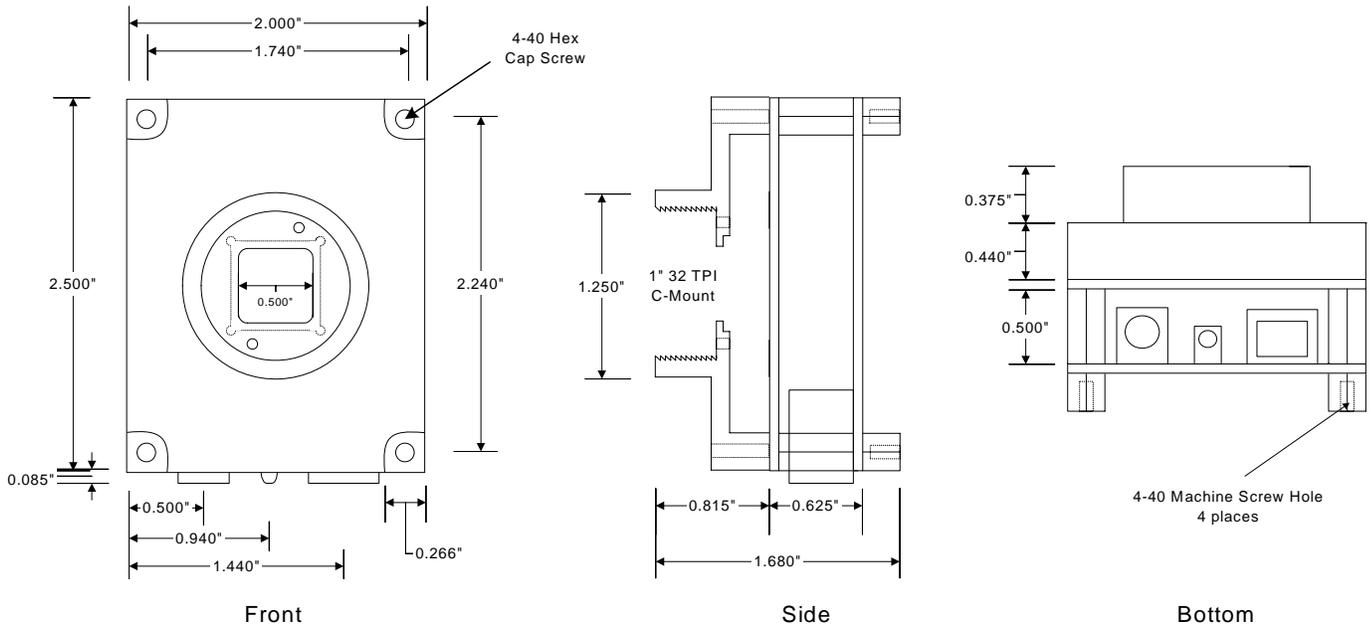
Color Response

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

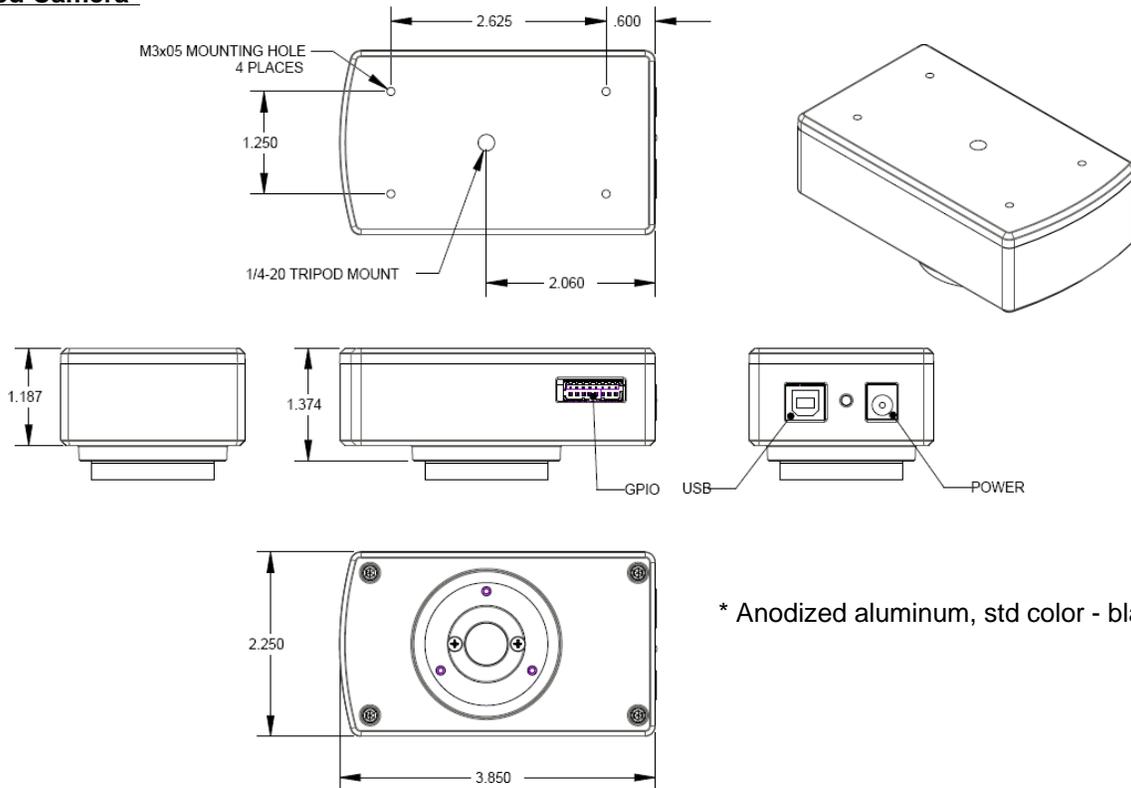
### Ordering Information

Lu160C	- Color Camera Module
Lu160M	- Monochrome Camera Module
Lu165C	- Enclosed Color Camera
Lu165M	- Enclosed Monochrome Camera
LuSDK	- Software Developer's Kit
Lu8201	- 6 VDC Power Supply (required)

## OEM Board-Level Camera



## Enclosed Camera\*



\* Anodized aluminum, std color - black

## INDUSTRIAL DIE CAST CAMERAS