

**1.4 Megapixel USB 2.0 Camera****Outline**

Lumenera's Lu130 and Lu135 series of megapixel cameras are designed to be used in a wide variety of applications, particularly in low-light conditions.

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

Electronic global shutter provides capabilities similar to a mechanical shutter, allowing simultaneous integration of the entire pixel array. This is ideal for capturing objects in high-speed motion.

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. Camera models are offered in both enclosed (Lu135) and board-level (Lu130) form. Custom form factor (sizes) as well as color and monochrome camera models are available.

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.

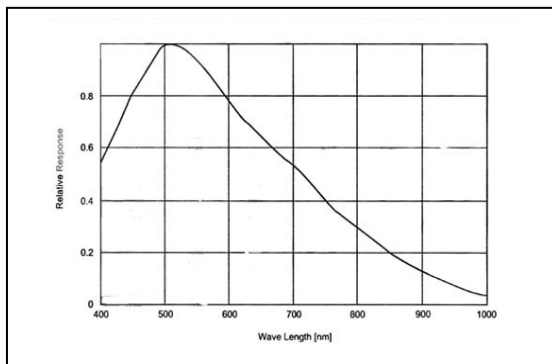
**Performance Features**

- High quality CCD sensor
- Excellent sensitivity with high color reproductivity
- Color or monochrome, interline transfer progressive scan, 1.4 megapixel CCD sensor
- High-speed USB 2.0 (480Mbits/sec)
- 15 fps at full 1392x1040 resolution  
30 fps 640x480
- Binning and Region of Interest (ROI) options improve sensitivity and provide higher frame rates
- Global shutter for capturing fast moving objects and strobe lighting
- GPI/Os for control of peripherals and synchronization of lighting (4in/4out)
- FCC Class B, CE Ready
- RGB Bayer video output
- 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, Windows Vista and Windows 7, 32 and 64-bit operating systems
- Complete SDK available
- Full one (1) year warranty

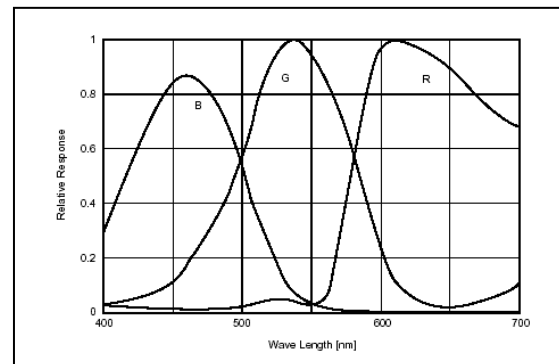
# Specifications

# Lu130/Lu135

Image Sensor	<b>1/2" format, color or mono, 6.5mm x 4.8mm array</b>
Effective Pixels	<b>1392x1040, 4.65 <math>\mu\text{m}</math> square pixels</b>
Frame Rate	<b>15 fps at 1392x1040, 30 fps with binning (2x - 4x)</b>
Sensitivity	<b>High</b>
Dynamic Range	<b>60dB</b>
White balance	<b>Manual</b>
Exposure	<b>Manual</b>
Dimensions (W x H x D)	<b>2.25 x 3.85 x 1.56 inches (enclosed)</b> <b>2.00 x 2.50 x 1.63 inches (board level)</b>
Mass	<b>~150g / 300g</b>
Power Requirement	<b>USB bus, optional external 5VDC, 500mA (not included)</b>
Power Consumption	<b>~2.5 Watts</b>
Operating Temperature	<b>0°C to +50°C</b>
Operating Humidity	<b>5% - 95%, Non-condensing</b>
Interface Connector	<b>Standard USB cable</b>
Lens Mount (Lens not included)	<b>C-Mount (CS-Mount option)</b>



Mono Response Curve



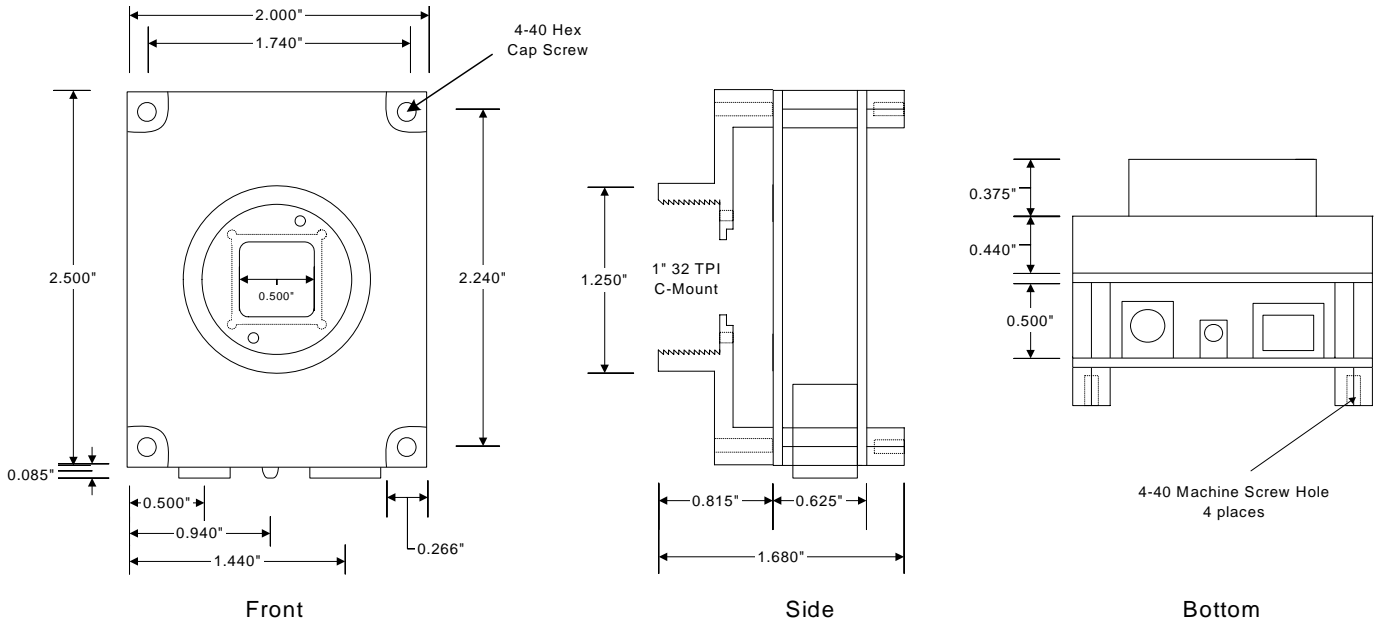
Color Response Curve

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

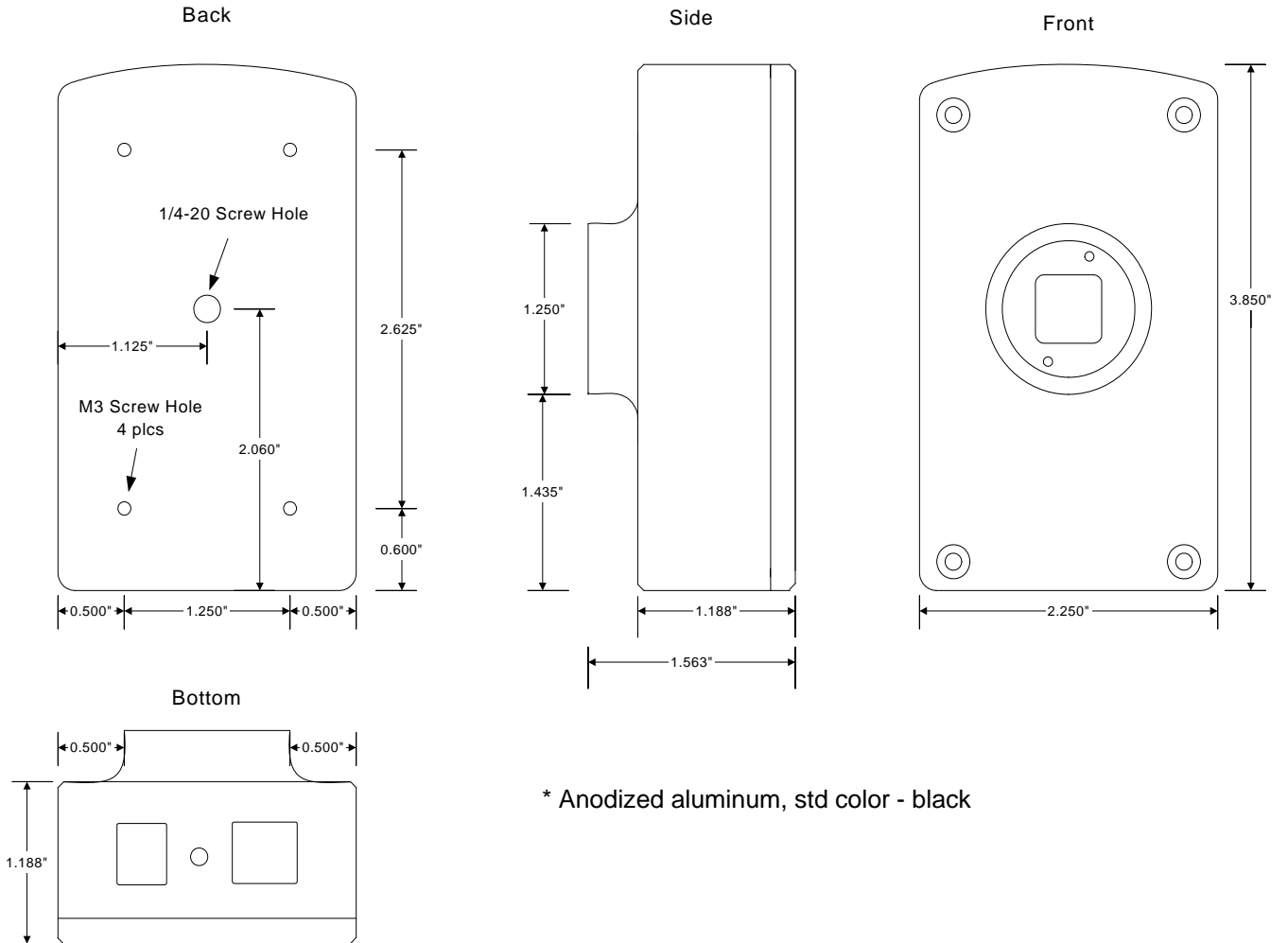
## Ordering Information

Lu130M	- Monochrome Camera Module
Lu130C	- Color Camera Module
Lu135M	- Enclosed Monochrome Camera
Lu135C	- Enclosed Color Camera
LuSDK	- Developer's Kit and Accessories

## OEM Board-Level Camera



## Enclosed Camera\*



\* Anodized aluminum, std color - black