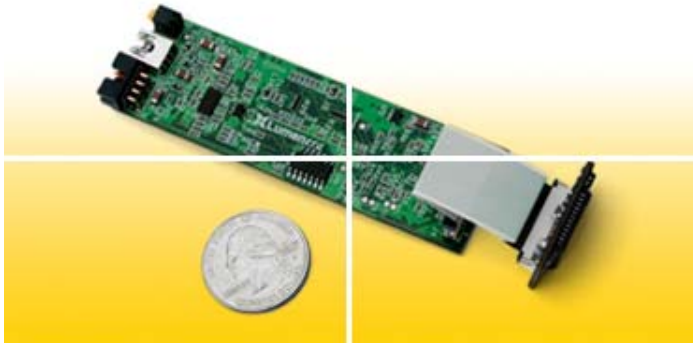


## 3.1 Megapixel USB 2.0 Camera



## Outline

Lumenera's Lu373 is a small form factor, single board tethered to a 2048 x 1536 resolution CMOS camera head. This single board design is a cost-effective solution for applications requiring megapixel resolution, fast frame rates, high dynamic range, and high sensitivity in uncontrolled lighting environments.

The Lu373's small form factor makes this camera an excellent fit for reduced-space systems such as handhelds, unmanned vehicles, and discreet surveillance cameras. Megapixel resolution allows for a wide field of view commonly found in cameras with a much larger factor, while a high-speed driver delivers up to 12 fps - suitable for fast-event image capture and quality control in high-throughput manufacturing environments. The Lu373's high sensitivity makes this camera the best choice for applications with ambient light conditions.

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. Lu373 model cameras are offered in board-level form with enclosure options, and custom form factor (sizes) 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.

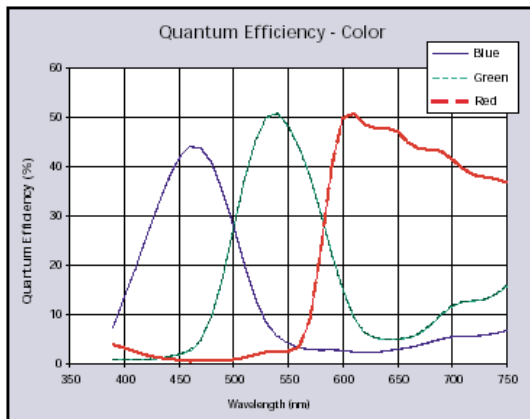
## Performance Features

- Small, flexible factor with CMOS camera head tethered to image processing board**
- 3.1 megapixel resolution (2048 x 1536), 1/2" format, color**
- Cost effective**
- High sensitivity**
- High dynamic range**
- Lower fixed pattern noise (FPN)**
- High-speed USB2.0 (480Mbits/sec)**
- 12 fps at full resolution / 40 fps at 1024x768 resolution (sub-sampled)**
- Auto white balance, auto exposure**
- Snapshot mode for use with strobe**
- GPI/Os for control of peripherals and synchronization of lighting (4in/4out)**
- Selectable 8 or 10-bit pixel data**
- Low power consumption**
- Simplified cabling - video, power and full camera control over a single USB cable**
- DirectShow compatible**
- USB cameras are software compatible with Windows 2K, Windows XP and Vista 32-bit and 64-bit operating systems**
- Complete SDK available**
- Full one (1) year warranty**

# Specifications

# Lu373

Image Sensor	1/2" format, color or mono, 6.55mm x 4.92 array
Effective Pixels	2048 x 1536, 3.2µm square pixels
Frame Rate	12 fps at 2048x1536, 25 fps at 1280x1024
Sensitivity	High
Dynamic Range	60dB
Auto Exposure	Automatic / Manual
White Balance	Automatic / Manual
Dimensions (W x H x D)	Processing Brd - 1.0"x 3.30"/Imager Brd - 1.0" x0.62"
Mass	~150g
Power Requirement	USB bus power
Power Consumption	~2.5 Watts
Operating Temperature	0°C to +50°C
Operating Humidity	5% - 95%, Non-condensing
Interface Connector	Mini USB



## Ordering Information

Lu373C	- Color Camera Module
Lu373M	- Monochrome Camera Module
LuSDK	- Software Developer's Kit

**Please note:** A minimum purchase quantity may apply.

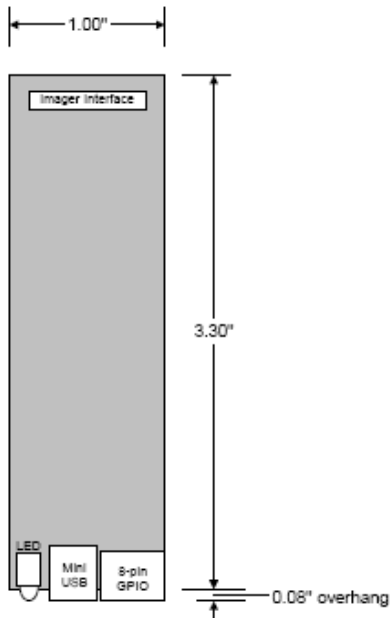
### Suggested Applications:

- Handheld devices
- Unmanned vehicles
- Discreet security & surveillance
- Mobile object detection

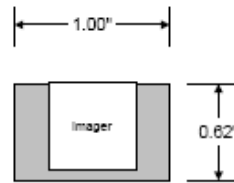
***Full customization  
available to meet your  
exact needs!***

## OEM Board-Level Camera

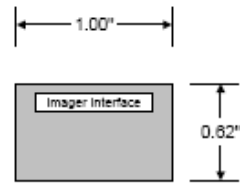
Processing/Interface Board



Imager Board Front



Imager Board Back



↑  
Up (with lens)

Image Center (Nominal)

X direction: Center of PCB

Y direction: 0.013" below PCB center line

Flex cable between boards  
(Imager Interface) can be  
maximum of 4" long.

Minimum 0.030" clearance from  
edge of PCB to components