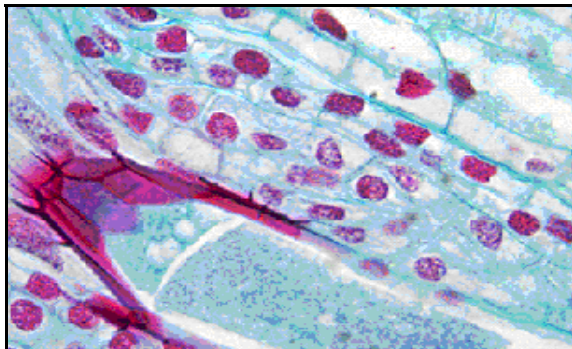


Outline

Lumenera's Lw1330 3.3 megapixel CCD digital camera is a versatile solution for clinical, life science, materials science, and microscopy systems integrators working under low light conditions. With 2080x1536 resolution and on-board processing, the Lw1330 delivers outstanding image quality for a wide variety of scientific OEM applications.



Live video preview provides for real-time focus, while auto exposure and auto white balance controls efficiently capture your optimal image over a USB 2.0 digital interface. An intuitive user application provides camera controls while full integration to popular third-party imaging applications is available through our TWAIN drivers. 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.

The USB 2.0 digital interface ensures a simple plug-and-play installation – and one standard cable minimizes camera clutter. Our stable camera drivers allow multiple cameras or other USB devices to run simultaneously and flawlessly. The Lw1330 cameras are offered in both enclosed and board-level form. Custom form factor (sizes) can be provided.

Lw1330 is supported by an experienced team of technical support and imaging experts. We understand your imaging needs and are here to help you get the most out of your camera.

Performance Features

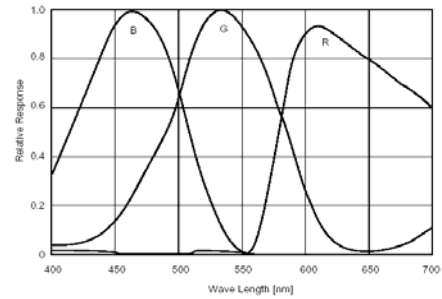
- ❑ High-speed USB 2.0 interface eliminates a framegrabber and facilitates ease of installation on both laptop and desktop computers
- ❑ Stable, reliable camera drivers for running multiple cameras on a PC or other USB devices
- ❑ Excellent sensitivity and low noise characteristics of the 3.3 megapixel CCD image sensor enable users to capture high quality images over a wide range of lighting conditions
- ❑ Full color sub-windowing allows for rapid focus and scanning of samples: 5 fps at full 2080x1536
- ❑ Faster frame rates with reduced region of interest
- ❑ Select 8 & 12-bit pixel data modes
- ❑ The RGB data captured through each pixel contains 36-bits of color image information resulting in 4096 intensity values
- ❑ GPIO for control of peripherals and synchronization of lighting (4in/4out)
- ❑ Camera control through an intuitive user TWAIN interface resulting rapid image capture archiving and documentation for high throughput applications, demanding research environments and teaching facilities
- ❑ Compact design equipped with a C-Mount, facilitating installation on all microscopes including upright, inverted and stereo
- ❑ Lw1330 cameras are software compatible with Windows™ 2K, Windows 32 bit and 64 bit XP, Windows 32 bit and 64 bit Vista
- ❑ DirectShow compatible
- ❑ Complete SDK available

Specifications

Lw1330

Camera Sensor

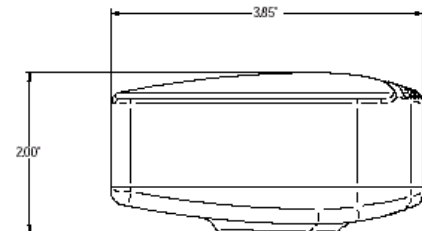
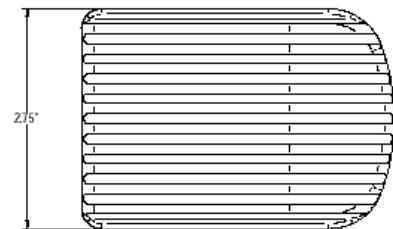
| | |
|------------------------|---|
| Image Sensor | 1/1.8" Interline Sony ICX262 3.3 megapixel color progressive scan CCD sensor |
| Effective Pixels | 2080 x1536, 3.45µm square pixels |
| Frame Rate | 5 fps at full resolution, higher fps with binning and ROI |
| Digital Output | 8 and 12-bit |
| Read Noise | 12 e- rms |
| Readout Frequency | 22.5 MHZ |
| Dimensions (W x H x D) | 2.25 x 3.85 x 1.56 inches (enclosed) |



Camera Controls

| | |
|------------------------|---|
| Mass | ~300g |
| Power Requirement | USB bus power, or external 5VDC - 500mA |
| Power Consumption | ~2.5Watts |
| Operating Temperature | 0° C to +50° C |
| Operating Humidity | 5%-95%, Non-condensing |
| Integration Time | 1/1000 to 16 sec |
| Shutter | Interlaced |
| ROI | User Selectable through mouse click and drag |
| Auto Exposure | Automatic / Manual |
| White Balance | Automatic / Manual |
| Gain | Programmable 1 to 10x |
| Interface Connector | Standard USB 2.0 high-speed interface |
| Dimensions (L x W x H) | 3.85 x 2.00 x 2.75 inches |
| Lens Mount | C-Mount lens adapter |
| Binning Options | 2x2, 3x3, 4x4 |

Color Response Curve



Recommended PC Specs:

- Pentium 4, 1.3GHz or higher
- 512Mb RAM
- +60GB hard drive free space or more
- USB 2.0 Port
- Windows XP SP2

Minimum PC Specs:

- 600MHz Processor
- 256Mbytes of SDRAM
- 20GB hard drive free space
- USB 2.0 Port
- Windows XP SP2

Product Includes:

- Lw1330 digital camera for USB 2.0
- CD-ROM with INFINITY user application software
- TWAIN driver
- Documentation
- USB 2.0 cable

Ordering Information

| | |
|---------|-----------------------------------|
| Lw1330C | – Board-level 3.3 MP Color Camera |
| Lw1335C | – Enclosed 3.3 MP Color Camera |
| LuSDK | – Software Developer's Kit |

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