CC1400 Digital Cooled CCD Video Camera

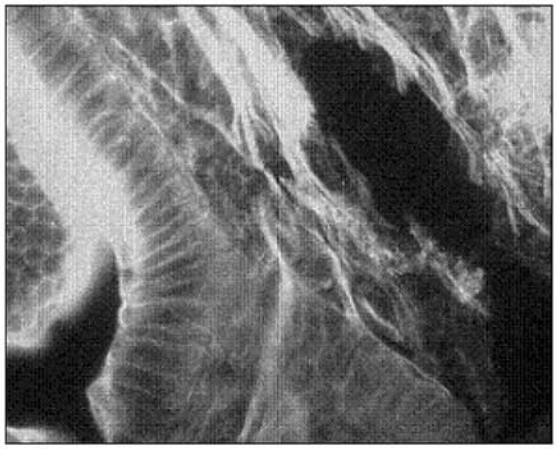
1.4 Megapixel Cooled CCD USB 2.0 Camera

High Resolution Cooled CCD Color or Monochrome Microscopy Camera for Quantitative Image Analysis

Outline

Meiji Techno's CC1400 camera is designed to be used in a wide variety of scientific applications. Cooled models are ideal 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.

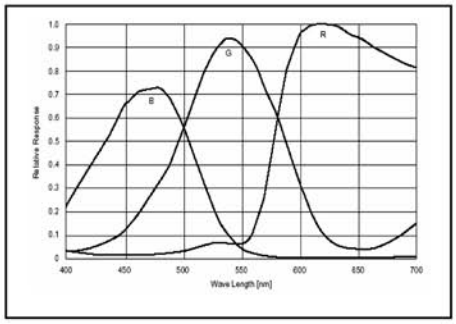
Hardware and software based synchronization trigger is available as an option provided. On-board memory is available for frame buffering.

Performance Features

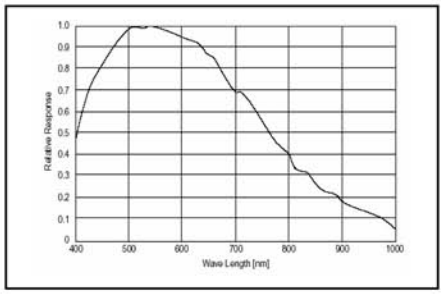
- **The high-speed USB 2.0 (480Mbits/sec) interface eliminates a framegrabber and facilitates ease of installation on both laptop and desktop computers**
- **Available in color or monochrome**
- **Cooled feature reduces thermal noise during low light fluorescent imaging**
- **The low noise characteristic of the *CC1400* progressive scan 1.4 megapixel CCD image sensor results in crisp color quality for the most demanding brightfield, phase contrast, and fluorescent applications including GFP, FISH, NIR, FRET, chemiluminescence, chemifluorescence, clinical pathology and cytology, life science and geology**
- **Full color sub-windowing allows for rapid focus and scanning of samples: 15 fps at full 1392x1040 resolution**
- **Select 8 & 12-bit pixel data modes**
- **The RGB data captured through each pixel contains 30-bits of color image information resulting in 1024 intensity values**
- **Camera control through an intuitive user TWAIN interface results in rapid image capture archiving and documentation for high throughput applications, demanding research environments and teaching facilities**
- **The *CC1400* has a compact design equipped with a C-Mount facilitating installation on all microscope configurations including upright, inverted and stereo**
- ***CC Series* cameras are software compatible with Windows™ 98 SE, Windows ME, Windows 2K and Windows XP operating systems**

Specifications

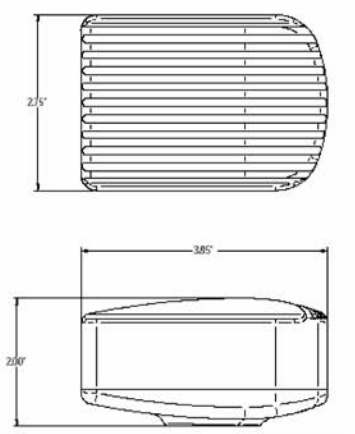
Camera Sensor	
Image Sensor	**Sony ICX285 2/3" format, 1.4 megapixel color or monochrome progressive scan CCD sensor**
Effective Pixels	**1392 X 1040, 1.4 million pixels**
Frame Rate	**15 fps at 1392x1040, increased through binning and ROI**
Digital Output	**8 and 12-bit**
Dark Current (e-/s)	**0.15 electrons / pixel / s when cooled**
Pixel Size	**6.45μm X 6.45μm**
Full well capacity	**>18,000 electrons**
Readout Noise	**8 e- rms**
Cooling type	**Hermetically sealed and dry gas filled Peltier cooling to 25 degrees Celsius below ambient**
Readout Frequency	**2.86 MHZ**
Camera Controls	
Power Requirement	**External 5VDC - 3amp**
Power Consumption	**~2.5 watts uncooled / ~8.5 watts cooled**
Operating Temperature	**0° C to +50° C**
Operating Humidity	**5%-95%, Non-condensing**
Integration Time	**2/1000 to 20 minutes**
Auto Exposure	**Automatic / Manual**
White Balance	**Automatic / Manual**
Gain	**Programmable / 1 to 10X optimizable**
Interface	**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



Mono Response Curve



Applications

Fluorescent Microscopy
Green Fluorescent Protein applications
Fluorescent In Situ hybridization
DNA analysis
Live Cell Imaging
Brightfield, Darkfield, DIC/Phase techniques
Near IR applications
Histology, Pathology and Cytology
Forensic Analysis
Semiconductor Inspection
Metallurgical microscopy

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