



## 5.0 Megapixel OLYMPUS Q-Color5™ CAMERA SYSTEM High Resolution FireWire™ Digital CCD Color Camera Designed for Publication and Documentation

The Q-Color5™ camera system with Real-Time-Viewing (RTV) delivers high resolution color images with a live preview video frame rate of up to 30 frames per second for fast scanning, framing, and focusing. The 5 Megapixel CCD sensor and 30-bit color digitization produce quality color images of brightfield, darkfield and fluorescence work making it ideal for microscopy documentation and publication. For low light applications, the Q-Color5™ cooled model minimizes thermal noise during long exposure times yielding high quality, low images. The FireWire™ IEEE 1394 digital interface facilitates use and installation.



A single wire connects the camera to the computer (including laptops) for full computer control of the camera. The Q-Color5™ includes QCapture Suite™ software for Windows® and Mac® based systems and QCapture Pro™ (Windows) for more advanced camera control and image processing. A Software Development Kit (SDK) is available for interfacing with custom software.

Features	Benefits
5.2 Megapixel CCD Sensor (5.0 active Mpixel)	High resolution images for publication
FireWire™ IEEE 1394 Digital Interface	Ease of use and installation Laptop computer use for portability No framegrabber or external power supply
Real-Time-Viewing Full Color Binning up to 4x4	25 frames per second live preview Increased sensitivity for rapid preview and focusing
Region of Interest (ROI) Function	Selection of a specific region within an image through an easy click and draw function on the computer screen
Exposure/Integration Control	Flexible control from 1.6 milliseconds to 18 minutes in 1 microsecond increments
Peltier Cooling on Cooled Model to 10°C below ambient	Minimizes thermal noise during low light imaging
30-bit Color Digitization	1024 intensity levels per color
Complete Camera Control through Windows® or Mac® desktop or laptop computer	Programmable exposure times, auto exposure, color balance control



## Olympus Q-Color5™ High Resolution Color CCD Digital FireWire™ Camera

### Technical Specifications

<b>Sensor</b>	Sony ICX282AQ – 2/3” optical format
Resolution	2580 x 1944 active pixel resolution, 5.0 Megapixels
CCD Type	<b>Interlaced*</b> , interline, Bayer color (R,G,B primary color mosaic filters on chip)
Pixel Size	3.4 μ x 3.4 μ
Well capacity	8600 e <sup>-</sup>
Readout noise	9.8 e <sup>-</sup>
S/N ratio	58 dB
Dark current (cooled)	2.3 e <sup>-</sup> /pixel/second
Dark current (uncooled)	9 e <sup>-</sup> /pixel/second
<b>Readout Speed**</b> <b>Preview Frame Rate</b>	20 MHz in 8-bit, 10 MHz in 10-bit
Real-Time-Viewing 8-Bit (default setting)	30 frames per second Full resolution – 3.5 fps Full frame readout time 286 ms (8bit) 555 ms (10-bit)
2x2 binning	5.9 fps (8-bit) 3.0 fps (10-bit) in full color
3x3 binning	7.4 fps (8-bit) 3.75 fps (10-bit) in full color
4x4 binning	8.9 fps (8-bit) 4.5 fps (10-bit) in full color
ROI	Region of Interest (up to 30 fps)
<b>Exposure Times</b>	1.6 ms to 17.9 minutes with 1 μ resolution
<b>Cooling (optional)</b>	Approx. 10° C below ambient Reduces dark current during long exposure times
<b>Power</b>	Cooled – 560mA@12V=6.72W Uncooled – 310mA@12V=3.72W The Q-Color5™ can only draw power through a FireWire™ port. An auxiliary power supply cannot be hooked up directly to the Q-Color5™. A PCMCIA FireWire™ card with an auxiliary power supply is required to run the Q-Color5™ on a laptop.
<b>Mounts</b>	Standard C-mount for microscopes or lens Standard camera tripod mount 1 / 4” – 20

**Interlaced**, interline Bayer color sensor reads 2 fields per frame, reading out odd then even pixels. The 2 fields have equivalent exposure times but not simultaneously. The time difference between the 2 field readouts are 105 ms in 8-bit and 210 ms in 10-bit. The sensor has been designed for capturing still images.

\*\* For fast previewing or focusing, RTV or binning modes can be used followed by full-resolution capture.

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