



Fluorescence Microscopy Camera

Fast, High Sensitivity Imaging of Live Cells

Fluorescence imaging of live cell samples requires short exposure times, gentle illumination of fragile cell specimens, and fast frame rates to capture image data with a high degree of precision and confidence.

The new EXi Blue camera was designed specifically to assist life science professionals to study processes within live cells—delivering fast acquisition speed, extreme sensitivity, and exceptional temporal resolution. The camera's high dynamic range allows researchers to resolve extremely bright and dim signals within a single image.

The versatile EXi Blue camera excels in a broad range of life science applications, including high-speed kinetic studies and precision imaging for all microscopy modes. The camera's advanced electronics and firmware produce extremely low dark current (effectively equivalent to -22° C cooling), resulting in excellent images during long exposure times. And when used with the optional RGB filter module, users can switch between monochrome, color and infrared imaging quickly and easily.

The EXi Blue camera is easy to use. It can be installed and operational within minutes, and features a fast IEEE1394b "FireWire" interface and simple, versatile software.



features	benefits
High sensitivity	■ Short exposure time and minimal cell toxicity
Active cooling	■ Reduced thermal noise
Low read noise	■ Precise measurement of dim signals
High quantum efficiency	■ Excellent sensitivity
6.45 micron pixels	■ Matched to common objective lenses
14-bit readout	■ More than 16,000 gray levels per pixel
Low dark current	■ Enhanced low light detection with longer exposure times
Integrated digitization	■ No RF interference
No need for external controller	■ Keeps bench space clutter-free
Easy installation	■ Ready to use in less than 10 minutes
Software included	■ Enables a variety of life-science applications
IEEE 1394b FireWire connection	■ Portability and ease of use
RGB module available	■ High-resolution color images

applications

The EXi Blue Fluorescent Microscopy camera is an extremely versatile, simple-to-use laboratory workhorse that is ideally suited to a variety of life sciences applications.

- Live-cell fluorescence imaging
- Fluorescent protein imaging (BFP, GFP, YFP, RFP)
- Time-lapse fluorescence imaging
- Kinetic studies including cell trafficking and cell motility
- Ratiometric imaging (calcium & pH)
- Immunofluorescence imaging
- Phase contrast, DIC and bright-field

EXi Blue Specifications

ccd sensor	
Light-Sensitive Pixels	1392 x 1040
Binning Modes	2, 4, 8
Exposure/Integration Control	10µs to 17.9min
Sensor Type	Sony® ICX285 front-illuminated interline CCD
Pixel Size	6.45µm x 6.45µm
Linear Full Well (1x1 Binning)	16,000e- (30MHz); 18,000e- (20MHz); 18,000e- (10MHz)
Read Noise	5.5e- (10MHz); 6.6e- (20MHz); 12.3e- (30MHz)
Dark Current	0.015 e-/pix/s
Cooling	0°C (regulated)
Digital Output	8 bits/14 bits
Readout Frequency	30, 20, 10MHz
Frame Rate	15fps full resolution @ 14 bits (30MHz)
camera	
Black-Out Mode	Turns off all LEDs on camera for low-light applications; software controlled
Computer Platforms/Operating Systems*	Windows® XP and Vista (32 bits)
Digital Interface	IEEE-1394b FireWire (two ports with simultaneous camera control)
External Trigger	TTL Input
Trigger Types	Internal, Software, External (Edge-Hi/Edge-Low/Pulse-Hi/Pulse-Low/Strobe-Hi/Strobe-Low)
External Sync	TTL Output
External RGB Filter Control	Support for RGB filter
Analog Gain Control	0.8x to 34.7x
Optical Interface	2/3", C-mount optical format
Threadmount	1/4" – 20 mount
Power Requirements	13.5 watts at 12 volts
Weight	800g (1.75lbs)
Warranty	2 years
Operating Environment	0 to 27°C, 80% relative humidity non-condensing
Storage Temperature	-10 to 60°C



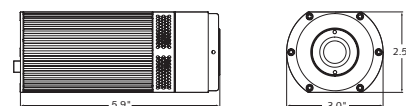
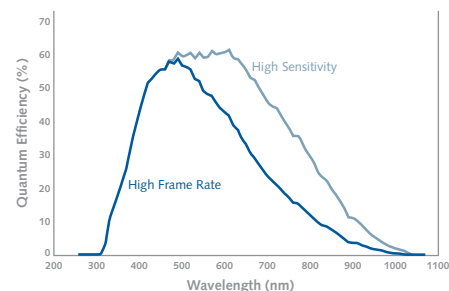
included

- **EXi Blue Fluorescence Microscopy Camera**
Model: EXI-BLU-R-F-M-14-C
- Power supply
- IEEE1394b FireWire cable (9-pin to 9-pin)
- IEEE1394b FireWire PCI card
- QCapture Suite software for PC
- Limited Warranty

camera options

- Performance Assurance Program (extended warranty)
- RGB Filter Module

spectral response



RoHS



*Refer to QImaging website for detailed listing of supported operating systems.
Note: Specifications are typical and subject to change.

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Digitizer Speed	10MHz				20MHz				30MHz			
Binning (Pixels)	1x1	2x2	4x4	8x8	1x1	2x2	4x4	8x8	1x1	2x2	4x4	8x8
Frame Rate (Full Field)	5.9fps	10.3fps	18.7fps	29.2fps	10.9fps	18.7fps	29.3fps	40.9fps	15.1fps	24.6fps	36.1fps	47.2fps
Full Well Capacity	18,000e-	27,000e-			18,000e-	27,000e-			16,000e-	27,000e-		
Read Noise	5.5e-				6.6e-				12.3e-			
Dynamic Range	3271:1	4909:1			2727:1	4090:1			1301:1	2195:1		

Results are typical and may vary from camera to camera.



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