Photometrics CoolSNAP™ cf2

1392 x 1040 imaging array
4.65 x 4.65-µm pixels

The CoolSNAP™ cf2 Monochrome camera from Photometrics® incorporates low-noise electronics and moderate CCD cooling to achieve good low-light sensitivity. A megapixel sensor with small, square elements ensures that each image shows extraordinary detail. This feature, along with a high-speed digitizer, shutterless operation, and an interline-transfer CCD, makes the CoolSNAP cf2 Monochrome camera ideal for high-resolution life science imaging applications.

Primary applications

Fixed-cell fluorescence

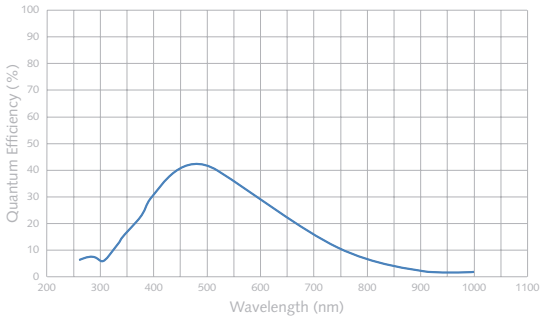
Pathology

Histology

DIC phase-contrast imaging

Darkfield imaging

Features	Benefits
20-MHz readout	Fast image readout for high-speed focus and image capture
1392 x 1040 imaging array 4.65 x 4.65-µm pixels	Resolves fine detail
Interline-transfer, progressive-scan CCD	Full resolution in every frame
Flexible binning and readout	Increases signal-to-noise performance while increasing the frame rate
IEEE-1394a or PCI interface	High-bandwidth, uninterrupted data transfer with no dropped frames
12-bit digitization	Quantifies bright and dim signals in the same image
Thermoelectric cooling	Low dark current allows longer integration times
C-mount	Easily attaches to microscopes, standard lenses, or optical equipment
Subcompact, fanless design	Low profile allows easy integration
Acquisition software	Captures, analyzes, and saves high-resolution images
PVCam® Circular buffers Device sequencing	Supported by numerous third-party software packages Real-time focus Precise integration with shutters, filter wheels, etc.
IEEE-1394a compatibility *PCI compatibility*	*Windows® XP/Vista 32 and Mac OS X* *Windows XP/Vista 32, Mac OS X, and Linux® (kernel versions 2.4 and 2.6.8)*



Region

Binning	1392 x 1040	512 x 512	256 x 256
1 x 1	10	20	38
2 x 2	20	37	62
3 x 3	28	49	77
4 x 4	35	59	90
8 x 8	55	86	114

(Frames per second)

Note: Frame rates are measured at 20 MHz with 0-millisecond exposure times.

	Specifications
CCD image sensor	Sony® ICX205AL; interline-transfer, progressive-scan device with microlenses
CCD format	1392 x 1040 imaging array 4.65 x 4.65-µm pixels 6.5 x 4.8-mm imaging area (optically centered) 1/2″ format
Grade	Sony Grade 0
System gain	3 e-/ADU
Linear full well	10,200 e-
Read noise	10 e- rms @ 20 MHz
Nonlinearity	<4%
Digitizer type	12 bits @ 20 MHz
Frame readout	96 ms/frame
CCD temperature	5°C below ambient
Dark current	<1 e-/p/s
Operating environment	15 to 30°C ambient, 0 to 80% relative humidity noncondensing
Dimensions	4.5″ x 5.0″ x 2.5″ (1.9 lbs)
I/O	TTL output while exposing (BNC connector)

Note: Specifications are typical and subject to change.

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