



# D A T A S H E E T

C O O L I S N A P F X S Y S T E M

## CoolSNAP fx Monochrome

Photometrics  
1300 x 1030 imaging array  
6.7 x 6.7- $\mu$ m pixels

The Photometrics CoolSNAP<sub>fx</sub> Monochrome camera is a fast, high-resolution digital camera system designed for low-light scientific and industrial applications. This cooled CCD camera system provides 12-bit digitization at 20 MHz. The fine pitch of the pixels, 6.7 x 6.7 microns, is ideally matched to the resolution of optical microscopes. Megapixel resolution and small pixels allow imaging of very fine detail, yet the pixels can be easily binned to improve sensitivity. Interline CCD technology provides high quantum efficiency in the blue/green.

### F E A T U R E S

### B E N E F I T S

20-MHz digitization	Fast image readout for high-speed focus and image capture
1300 x 1030 imaging array 6.7 x 6.7- $\mu$ m pixels	Resolves fine detail Ideally matched to optical microscope
Flexible binning and readout	Increases light sensitivity while increasing the frame rate
12-bit digitization	Quantifies both bright and dim signals in the same image
Thermoelectric cooling	Long integration times for higher sensitivity
C-mount	Easily attaches to microscopes, standard lenses, or optical equipment
PCI interface	Works with PC, Macintosh, or Linux®
Interline, progressive-scan CCD	Electronic shuttering eliminates camera vibration and facilitates fast triggering
Video output	Compatible with standard video equipment

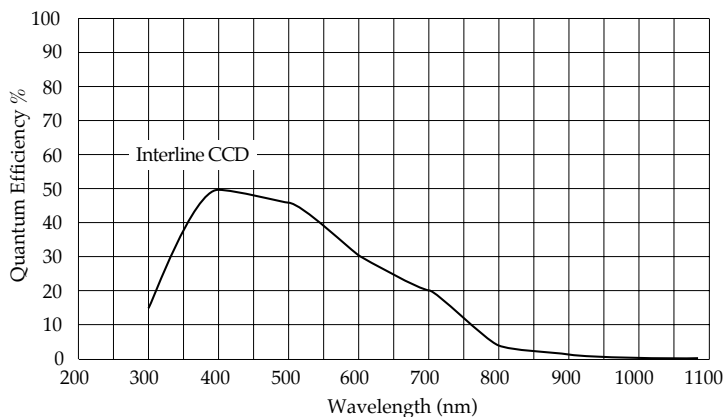


Photometrics  
**CoolSNAP<sub>fx</sub>**



# DATASHEET

Region



Binning		1300 x 1030	512 x 512	256 x 256
	1 x 1	12	22	39
	2 x 2	22	39	62
	3 x 3	31	52	77
	4 x 4	38	62	88

(Frames per second)

Frame rates are measured at 20 MHz with 0-second exposure times.

## SPECIFICATIONS

CCD image sensor	Sony ICX061; progressive-scan CCD
CCD format	1300 x 1030 imaging pixels; 6.7 x 6.7- $\mu$ m pixels; 8.71 x 6.90-mm imaging area (optically centered)
Grade	Grade 0: 0 point defects, 0 cluster defects, 0 column defects (based on CCD manufacturer's cosmetic blemish definitions)
Linear full well	18,000 e <sup>-</sup> (single pixel) typical; 30,000 e <sup>-</sup> (2x2 binned pixel) typical
Read noise	<15 e <sup>-</sup> rms @ 20 MHz typical
Readout bits/speed	12 bits @ 20 MHz or 10 MHz; software selectable
Frame readout	94 ms/frame
CCD temperature	-30°C regulated
Video output	RS170/PAL selectable
Dark current	0.01 e <sup>-</sup> /p/s (-30°C)
Operating environment	0 to 30°C ambient, 0 to 80% relative humidity noncondensing

Note: Specifications are typical and subject to change.



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CoolSNAP fx Monochrome Rev A3