## HIGH PERFORMANCE EMCCD & CCD CAMERAS FOR LIFE SCIENCES



Primary applications Fixed Cell Imaging Electrophysiology Immunofluorescence **Near-Infrared DIC** Calcium/Ion Imaging

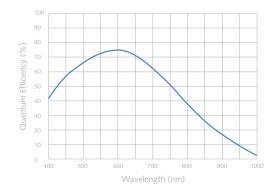




1940 x 1460 imaging array 4.54 x 4.54 µm pixels

The CoolSNAP KINO Monochrome CCD camera is a high resolution, high sensitivity imaging solution for moderate-light life science applications. It provides high spatial resolution for capturing fine details with its 4.54µm pixel pitch with 14-bit digitization at 20MHz. Its 2.8 Megapixels and a high Quantum Efficiency enables users to acquire exceptionally detailed images with clean backgrounds and the option to maximize performance using binning.

Features	Benefits	
1940 x 1460 imaging array 4.54 x 4.54 µm pixels	High spatial resolution for imaging finer details	
High Quantum Efficiency	~75% peak quantum efficiency delivers high sensitivity	
20 MHz read out	High Speed readout to maximize temporal resolution	
USB 2.0 Interface	Easy connectibility and setup	
Binning	Increase frame rate and signal-to-noise performance	
14-bit digitization	Quantify bright and dim signals in the same image	
No Fan	Ideal for vibration-sensitive applications	
C-mount	Easily attaches to microscopes, standard lenses, or optical equipment	
Acquisition software	Captures, analyzes, and saves high-resolution images	
PVCam® Driver	Support in a wide range of third party software packages Supported in Windows 7 64-bit/32-bit	



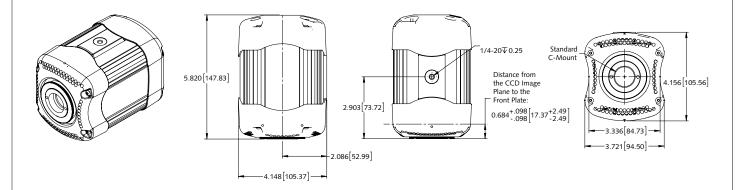
		Region		
		1940 x 1460	970 x 730	646 x 486
Binning	1 x 1	6.3	11.8	16.8
	2 x 2	11.6	20.8	28.4
	3 x 3	16.2	27.8	36.5
	4 x 4	20.1	33.2	42.6

(Frames per second)

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

	Specifications	
CCD Sensor	Sony® ICX-674 Interline CCD	
CCD Format	1940x1460 imaging array 4.54x4.54 $\mu$ m pixels 8.8 x 6.6 mm imaging area (11mm diagonal, 2/3" format)	
Linear Full-Well	12,000e-	
Read Noise	< 6.5e-	
Nonlinearity	<1%	
Digitization	20MHz, 10MHz, 1.25MHz	
Cooling	20°C	
Dark Current	0.07 e-/pixel/second @ 20°C	
Operating Environment	0 to 30°C ambient, 0-80% relative humidity non-condensing	
Triggering	Trigger First Mode Strobe Mode Bulb Mode	
Power Requirements	5V DC, 4A Maximum	

Note: Specifications are typical and subject to change.



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info@photometrics.com tel: +1 520.889.9933