



#### Primary applications

**Fixed Cell Imaging**

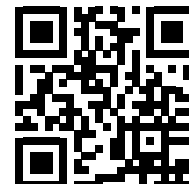
**Electrophysiology**

**Immunofluorescence**

**Near-Infrared DIC**

**Calcium/Ion Imaging**

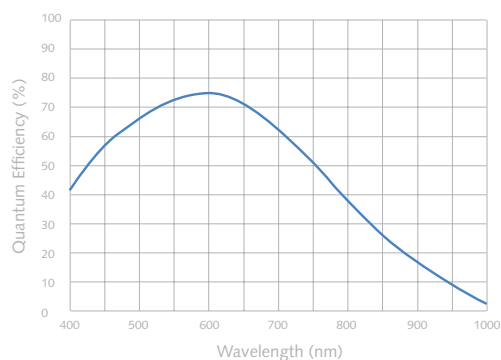
photometrics®  
**CoolSNAP™**  
**KINO**



1940 x 1460 imaging array  
4.54 x 4.54  $\mu\text{m}$  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 4.54 $\mu\text{m}$  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 $\mu\text{m}$ 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 connectivity 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



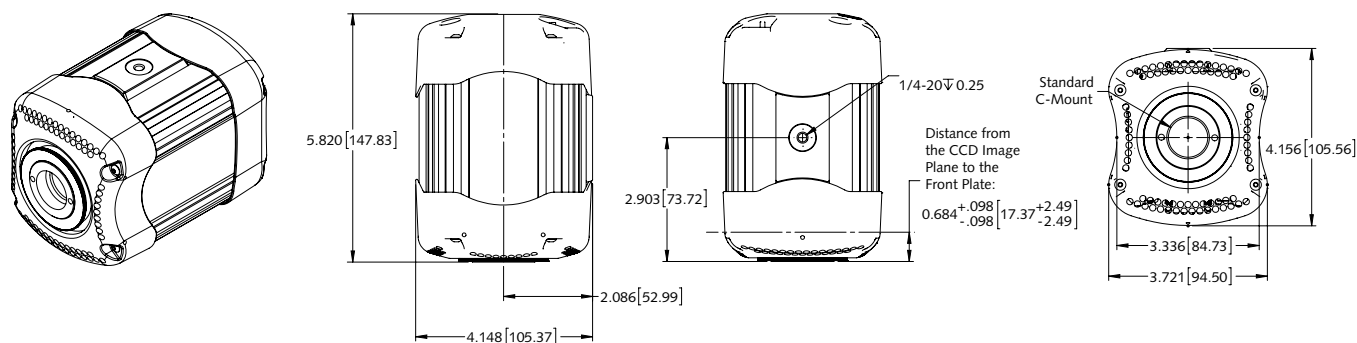
	Region		
	1940 x 1460	970 x 730	646 x 486
Binning	1 x 1	6.3	11.8
	2 x 2	11.6	20.8
	3 x 3	16.2	27.8
	4 x 4	20.1	33.2

(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 µm pixels 8.8 x 6.6 mm imaging area (11mm diagonal, 2/3" format)
Linear Full-Well	12,000e-
Read Noise	7e- @ 20MHz 6e- @ 10MHz 5e- @ 1.25MHz
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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