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Part number	Type	Name of product
C9100-12	High Sensitivity	Back-Thinned Electron Multiplier CCD Camera



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The C9100 series gather all expected features: high gain, high signal to noise ratio, resolution and speed, thanks to a new generation back-thinned EM-CCD sensor in a proprietary permanently sealed vacuum chamber evacuated to 10⁻⁸ Torr.

With on-chip multiplication technology of the EM-CCD sensor the signal is drastically boosted while readout noise value is kept less than 1 electron r.m.s. at high gain mode. The gain factor of the C9100-12 is up to 2000 and this camera is able to grab 35 frames per second keeping 14 bit dynamic range and full resolution. The C9100-12 also supports sub-array and binning modes, which enable high frame rate, 100 frames per second or higher.

The C9100-12 is recommended for all applications requiring high gain, speed, good resolution, high dynamics and signal to noise ratio.

Datasheet:
 229 KB

Key Specifications

Part number	C9100-12
Name of product	Back-Thinned Electron Multiplier CCD Camera
Spectral response min	400nm
Spectral response max	1080nm
Features	

- High quantum efficiency
- High sensitivity with on-chip multiplication
- Electron multiplier gain max. 2000 times
- Easy handling and maintenance
- High resolution 512 (H) x 512 (V) pixel
- Lifetime warranty for the sensor assembly

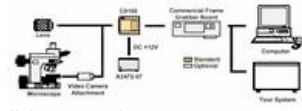
Applications

- Intracellular ion imaging
- Intravital microscopy (Real time observation of circulating blood cells in living animals)
- Fast tracking of small particles
- Single molecule observation at the photon level
- High speed fluorescence cell tomography

Imaging device	Frame transfer CCD. back-thinned
Shutter	No
Horizontal number of pixels	512
Vertical number of pixels	512
Cell size - horizontal	16µm
Cell size - vertical	16µm
Effective Horizontal Size	8.192mm
Effective Vertical Size	8.192mm
Scan Mode 1	min. gain
Scan Mode 2	max. gain = 2000MHz
Pixel clock rate Scan Mode 1	11Fr/sec
Frame Rate Scan Mode 1	272.48 with binning r.m.s.
Read noise Scan Mode 1	40electrons
Read noise Scan Mode 2	<1electrons
Full well capacity Scan Mode 1	370
Full well capacity Scan Mode 2	400
A/D converter Scan Mode 1	14
A/D converter Scan Mode 2	14
Cooling Method	Peltier, forced air cooling plus hermetic sealing
Cooling Temperature	-50
Output type	Camera link
Exposure time min	27 (1ms with external trigger)ms
Exposure time max	10secs
External control	Camera link
Sub-array	yes
Binning	yes
External trigger	yes
Contrast Enhancement	No"Vac ; Hz"

Lens mount	C-mount
Line voltage	+12V DC

Drawing



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