

3.2.3.3 190-1100nm Gig-E Silicon CCD Cameras

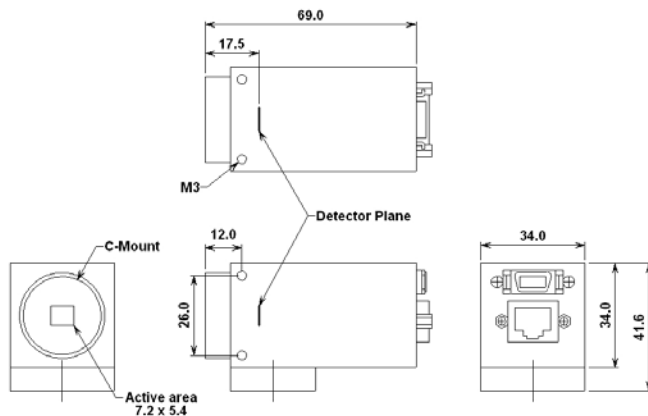
Models Gevica

Features

- Ethernet compatible
- Network multiple cameras, multiple versions of BeamGage
- Long cable distances
- High speed image acquisition
- External trigger for synchronization with laser pulses

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Gig-E Cameras for use with Laptop or Desktop PC

Item	Specification
Model	Gevica
Application	1/1.8" format, high resolution, networkable, long cable distances, adjustable ROI
Spectral Response	190 - 1100nm*
Maximum beam size	7.16mm (H) x 5.44mm (V)
Pixel spacing	4.4μm x 4.4μm
Number of effective pixels	1600 x 1200
Minimum system dynamic range ⁽¹⁾	~57dB full speed, full resolution, min gain
Linearity with Power	±1%
Accuracy of beam width	±2%
Frame rates	17fps @ full resolution / 7.5fps optional; faster rates with binning
Shutter duration	60ms @ 17fps; 133ms @ 7.5fps
Gain control	33dB
Trigger	5V TTL 2μsec min, positive pulse, rising edge triggered
Photodiode trigger	N/A
Saturation intensity ⁽¹⁾	0.3μW/cm ²
Lowest measurable signa ⁽¹⁾	0.5lux @ 17fps
Damage threshold	50W/cm ² / 0.1J/cm ² with all filters installed for <100ns pulse width ⁽³⁾
Dimensions and CCD recess	34mm x 34mm x 69mm CCD recess: 17.5mm below surface
Image quality at 1064nm	Pulsed with video trigger - good, Pulsed sync - excellent, CW - good
Operation mode	Inline transfer progressive scan
Software supported	BeamGage - Enterprise
PC interface	Gigabit ethernet
Minimum host system requirements	PC desktop with PCI-Express slot or laptop with PCI-Express/34 slot
Windows OS support	Windows 7 (32/64) or Vista (32/74)
Notes:	<p>(1) Camera set to full resolution at maximum frame rate and equivalent exposure times, running CW at 632.8nm wavelength. Camera set to minimum useful gain for saturation test and maximum useful gain for lowest signal test.</p> <p>(2) The maximum rate depends on the ROI (Region of Interest) size, the bits readout, and the number of cameras on the same bus. The SCOR 20 operates at 7.5Hz 12 bits and 15Hz 8 bits. It operates up to at least 60Hz with a smaller ROI. The frame rate also depends on PC resources.</p> <p>(3) May be usable for wavelengths below 350nm but sensitivity is low and detector deterioration may occur. Therefore UV image converter is recommended. Although our silicon cameras have shown response out to 1320nm it can cause significant blooming which could lead to significant errors of beam width measurement. We would suggest our XC130 InGaAs camera for these wavelengths to give you the best measurements.</p> <p>(4) This is the damage threshold of the filter glass of the filters. Assuming all filters mounted with ND1 (red housing) filter in the front. Distortion of the beam may occur.</p>