3.3.4.3 400-1700nm Cameras

3.3.4.3.1 High Resolution CQD GigE NIR-SWIR-VIS Camera

Features

- Wavelength range 400-1700nm
- Resolution: VGA
- Quantum Dots CMOS technology
- BeamGage Professional software included

SP301Q

Model	SP301Q	
Format	1/1.33”	
Wavelengths (1)	400 – 1700nm	
Active area	9.6 x 7.7mm	
Pixel spacing	15µm x 15µm	
Beam sizes (2)	150µm-7.7mm	
Number of effective pixels	640 x 512	
Dynamic range	55dB	
Linearity with Power	±2%	
Uniformity (3)	±3%	
Accuracy of Beam width	±3%	
Frame rates in 14-bit mode (4)	60 fps	
Exposure time	10µs - 200ms	
Compatible light sources	CW, Pulsed	
Trigger	Hardware/Software Trigger & Strobe Out	
Photodiode trigger (Optional) (5)	InGaAs response: SP90409	
Saturation Intensity (6)	0.3mW/cm^2	
Lowest Measurable Signal (6)	5nW/cm^2	
Damage Threshold of ND Filters (7)	50W/cm^2 1J/cm2 for <100ns pulse width	
Dimensions	61mm x 61mm x 102mm	
Imager Recess	12.5mm	
Operation mode	CQD SWIR, Global Shutter	
Operating Temperature	10°C to 40°C	
Operating Humidity	5% to 90% (non-condensing)	
PC interface	GigE	
OS Supported	Windows 10 (64) Windows 11 (64)	
Compliance	CE, UKCA, China RoHS	
Ordering Information		
Supported software	Item	P/N
BeamGage Professional	BGP-GigE-SP301Q	**SP90659**
Accessories		
IR Longpass filter, blocks VIS		**SP98012**

Notes:
(1) The Quantum E3iciency chart is presented in the Q&A section.
(2) The maximum beam size refers to ‘flat-top’ laser beams. For Gaussian beams, reduce the maximum beam size by one-third. For smaller beams, the 4X Reimaging Beam Expander accessory (PN: SPZ17022) can be used.
(3) Uniformity over central 95% of the detector
(4) Dependent on PC processor and graphics card performance.
(5) For more information, please see “Optical Camera Trigger” catalog page.
(6) Camera set to full resolution at maximum frame rate. Camera set to minimum gain and 1ms exposure time for saturation test and 100ms exposure time for the lowest signal test.
(7) This is the damage threshold of the filter glass. Assuming all filters are mounted with ND1 (red housing) filter in the front. Distortion of the beam may occur with average power densities of 5W/cm^2 for beam size 5mm, 10W/cm^2 for 2mm beam, and >30W/cm^2 for 1mm beam.

SP301Q