

### 3.3.4.1.2 GigE/USB Silicon CCD Cameras

#### SP920G, SP920s high resolution

##### Features

- 1/1.8" imager format
- Interface:
  - GigE: SP920G
  - USB: SP920s
- Small camera size: SP920s
- >60dB true dynamic resolution



SP920G



SP920s

Model	SP920G	SP920s		
Application	1/1.8" format	1/1.8" format		
Spectral response <sup>(2)</sup>	190 - 1100nm	190 - 1100nm		
Active area	7.1mm x 5.3mm	7.1mm x 5.3mm		
Beam sizes	44µm - 5.3mm	44µm - 5.3mm		
Pixel spacing	4.4µm	4.4µm		
Number of effective pixels	1624 x 1224	1624 x 1224		
Minimum system dynamic range	61 dB	60 dB		
Linearity with power	±1%	±1%		
Accuracy of beam width	±2%	±2%		
Frame rates in 12 bit mode <sup>(4)</sup>	14 fps at full resolution	15 fps at full resolution		
Shutter duration	30µs to multiple frames	30µs to multiple frames		
Gain control	0 dB to 24 dB	0 dB to 24 dB		
Trigger	Hardware/Software trigger & strobe out	Hardware/Software trigger & strobe out		
Photodiode trigger	Si response: SP90408	Si response: SP90408		
Saturation intensity <sup>(1)</sup>	0.97µW/cm <sup>2</sup>	0.97µW/cm <sup>2</sup>		
Lowest measurable signal <sup>(1)</sup>	1.2nW/cm <sup>2</sup>	1.2nW/cm <sup>2</sup>		
Damage threshold <sup>(3)</sup>	50W/cm <sup>2</sup> / 0.1J/cm <sup>2</sup> with all filters installed for < 100ns pulse width			
Dimensions	44 mm x 29 mm x 58 mm	29 mm x 29 mm x 29.5 mm		
CCD recess	17.5 mm	4.5 mm		
Image quality at 1064nm	Pulsed with trigger sync - excellent Pulsed with video trigger - good CW - good	Pulsed with trigger sync - excellent Pulsed with video trigger - good CW - good		
Operation mode	Interline transfer CCD	Interline transfer CCD		
PC interface	GigE	USB 3.0		
OS supported	Windows 7 (64) and Windows 10			
<b>Ordering Information</b>				
Supported software	Item	P/N	Item	P/N
BeamGage Professional	BGP-GIGE-SP920G	<b>SP90520</b> <sup>(6)</sup>	BGP-USB3-SP920s	<b>SP90550</b> <sup>(6)</sup>
BeamGage Standard	BGS-GIGE-SP920G	<b>SP90519</b> <sup>(6)</sup>	BGS-USB3-SP920s	<b>SP90549</b> <sup>(6)</sup>

- Notes:
- (1) Camera set to full resolution at maximum frame rate and exposure times, running CW at 633nm wavelength. Camera set to minimum useful gain for saturation test and maximum useful gain for lowest signal test.
  - (2) The camera's natural response is from 350nm through 1100nm. To measure effectively below 350nm, please make use of one of our UV converters. Otherwise the sensitivity is too low and the measurement accuracy may degrade.
  - (3) 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 with average power densities as low as 5W/cm<sup>2</sup>.
  - (4) Highly dependent on PC processor and graphics adapter performance.
  - (5) Comes with GigE cable, Power with Trigger cable and 3 ND filters.
  - (6) Comes with USB 3.0 cable, Trigger cable and 3 ND filters.

