3.3.4.2.1 Phosphor Coated CCD Cameras For NIR Response

Features

- 1440-1605nm Wavelengths •
- NIR Telecom mode field analysis •
- NIR Laser beam analysis •

Available Models

- USB models: SP920s-1550 .
- Large Format: LT665-1550 •



Model	SP920s-1550	SP920s-1550 LT665-1550		
Application	NIR wavelengths, 1/1.8" format, low resolution		NIR wavelengths, 1" format, higher resolution	
Wavelengths	1440 - 1605nm		1440 - 1605nm	
Active area	7.1mm x 5.3mm		12.5mm x 10mm	
Beam sizes (1)	600μm - 5.3mm		600µm - 9.9mm	
Pixel spacing ⁽²⁾	4.4μm x 4.4μm		4.54μm x 4.54μm	
Number of effective pixels	1624 x 1224		2752 x 2192	
Dynamic range ⁽³⁾	~30 dB		~30 dB	
inearity with power	±5%		±5%	
Accuracy of beam width	±5%		±5%	
Frame rates in 12 bit mode (4)	15 fps at full resolution		27 fps at full resolution	
Shutter duration	70µs to multiple rames		31µs to multiple frames	
Gain control	0 dB to 24 d		0.8 dB to 56 dB	
Trigger	Supports both trigger and strobe out		Supports both trigger and strobe out	
Photodiode trigger (Optional) (5)	InGaAs, esponse: SP90409		InGaAs response: SP90409	
Saturation intensity	7mW/g/n² at 1550nm			
Lowest measurable signal	50µW/cm ²			
Damage threshold	50W/ m ² f ro/cm ² with all filters inst	all d or < 100ns pul:	se width ⁽⁶⁾	
Ambient operating temperature	50W/ m ² ¹ to/cm ² with all filters installed for < 100ns pulse 0 150° C		0 - 50° C. Recommended to connect to heat sink	
Dimensions	29. nm x 29. nm x 29. 5 nm		43mm x 43mm x 65mm	
CCD recess	4.5mm		17.5mm	
Operation mode	Interine transfer CCD		Quad Tap interline transfer CCD	
PC interface	USB 3.0			
OS supported	Windows (64) and Windows 10			
Compliance	CE, UKCA, Obina Rohe			
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Supported software	Item	P/N	Item	P/N
BeamGage Professional	BGP-USB3-SP920s-1550	SP90562 (7)	BGP-USB3-LT665-1550	SP90385 ⁽⁸⁾
BeamGage Standard	BGS-USB3-SP920s-1550	SP90561 (7)	BGS-USB3-LT665-1550	SP90384 ⁽⁸⁾

(1) The maximal beam size refers to "Flat-top" laser beams. For Gaussian beams, reduce maximum beam size by 1/3.
(2) Despite the small pixel size, the spatial resolution will not exceed 50µm due to diffusion of the light by the phosphor coating.
(3) Signal to noise ratio is degraded due to the gamma of the phosphor's response. Averaging or summing of up to 256 frames improves dynamic range by up to 16x = +24 dB.
(4) In normal (non-shuttered) camera operation, the frame rate is the fastest rate at which the laser may pulse and the camera can still separate one pulse from the next. With electronic shutter operation, higher rate laser pulses can be split out by matching the laser repetition to the shutter speed.
(5) For more information please see "Optical Camera Trigger" catalog page.
(6) 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 of 5MV/cm² for beam size 5mm, 10W/cm² for 2mm beam and >30W/cm² for 1mm beam.
(7) Comes with USB 3.0 cable, Power with Trigger cable and 3 ND filters.



