

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

SP920s-1550



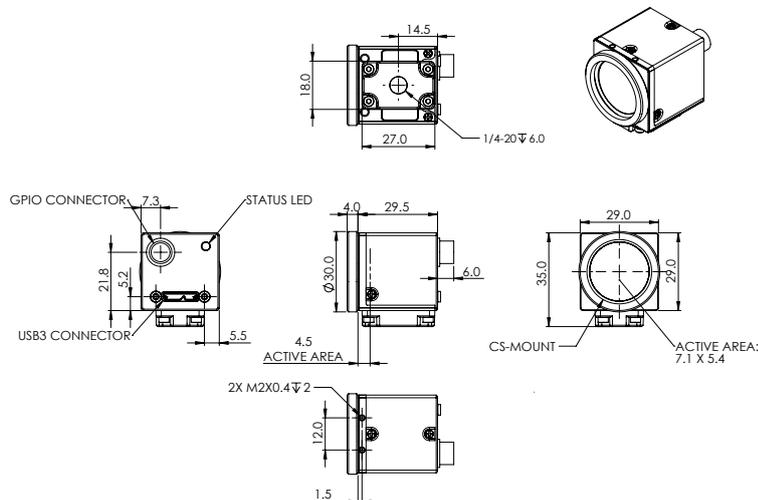
LT665-1550



Model	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	600µm - 5.3mm	600µm - 9.9mm		
Pixel spacing ⁽¹⁾	4.4µm x 4.4µm	4.54µm x 4.54µm		
Number of effective pixels	1624 x 1224	2752 x 2192		
Dynamic range ⁽²⁾	-30 dB	-30 dB		
Linearity with power	±5%	±5%		
Accuracy of beam width	±5%	±5%		
Frame rates in 12 bit mode ⁽³⁾	15 fps at full resolution	27 fps at full resolution		
Shutter duration	70µs to multiple frames	31µs to multiple frames		
Gain control	0 dB to 24 dB	0.8 dB to 56 dB		
Trigger	Supports both trigger and strobe out	Supports both trigger and strobe out		
Photodiode trigger (Optional) ⁽⁴⁾	InGaAs response: SP90409	InGaAs response: SP90409		
Saturation intensity	7mW/cm ² at 1550nm			
Lowest measurable signal	50µW/cm ²			
Damage threshold	50W/cm ² / 1J/cm ² with all filters installed for < 100ns pulse width ⁽⁵⁾			
Ambient operating temperature	0 - 50° C	0 - 50° C. Recommended to connect to heat sink		
Dimensions	29mm x 29mm x 29.5mm	43mm x 43mm x 65mm		
CCD recess	4.5mm	17.5mm		
Operation mode	Interline transfer CCD	Quad Tap interline transfer CCD		
PC interface	USB 3.0	USB 3.0		
OS supported	Windows 7 (64) and Windows 10			
Compliance	CE, UKCA, China RoHS			
Ordering Information				
Supported software	Item	P/N	Item	P/N
BeamGage Professional	BGP-USB3-SP920s-1550	SP90562 ⁽⁶⁾	BGP-USB3-LT665-1550	SP90385 ⁽⁷⁾
BeamGage Standard	BGS-USB3-SP920s-1550	SP90561 ⁽⁶⁾	BGS-USB3-LT665-1550	SP90384 ⁽⁷⁾

- Notes:
- (1) Despite the small pixel size, the spatial resolution will not exceed 50µm due to diffusion of the light by the phosphor coating.
 - (2) 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.
 - (3) 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.
 - (4) For more information please see "Optical Camera Trigger" catalog page.
 - (5) 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 5W/cm² for beam size 5mm, 10W/cm² for 2mm beam and >30W/cm² for 1mm beam.
 - (6) Comes with USB 3.0 cable, Trigger cable and 3 ND filters.
 - (7) Comes with USB 3.0 cable, Power with Trigger cable and 3 ND filters.

SP920s-1550



LT665 - 1550

