3.3.4.1.3 Large Format USB & GigE Cameras

LT665

Features

- Large 1" imager format
- High resolution
- High speed
- 54dB true dynamic resolution

SP504S

Features

- 23mm x 23mm imager format
- Highest resolution
- CMOS, Global shutter

LBS-400 to SM2 Adapter

• 44.6 dB true dynamic resolution





Model	LT665		SP504S	
Format	1"		APS-H	
Wavelengths (1)	190 - 1100nm		340 - 1100nm	
Active area	12.5mm x 10mm		23mm x 23mm	
Beam sizes	46μm - 9.9mm		45µm - 23mm	
Pixel spacing	4.54µm x 4.54µm		4.5µm x 4.5µm	
Number of effective pixels	2752 x 2192		5120 x 5120	
Dynamic range	54 dB		44.6 dB	
Linearity with power	±1%		±1%	
Accuracy of beam width	±2%		±2%	
Frame rates (2)	27 fps at full resolution (12 bit mode)		4.5 fps (10 bit mode) (3)	
Shutter duration	31µs to multiple frames		10µs – 400 ms	
Gain control	0.8 dB to 56 dB		N/A	
Trigger	Hardware/Software trigger & strobe out		Hardware/software & strobe out	
Photodiode trigger (Optional) (4)	Si response: SP90408		Si response: SP90408	
Saturation intensity	14μW/cm ^{2 (5)}		1.68mW/cm ² at 633nm ⁽⁶⁾	
Lowest measurable signal	0.3nW/cm ² (5)		0.25nW/cm ² at 633nm ⁽⁶⁾	
Damage threshold (7)	50W/cm ² / 1J/cm ² with all filters installed for < 100ns pulse width		50W/cm2 / 1J/cm2 with all filters installed for < 100ns pulse width	
Ambient operating temperature	0 - 50° C. Recommended to connect to heat sink		10° C - 40° C	
Dimensions	43mm x 43mm x 65mm		68mm x 68mm x 62.6mm	
Imager recess	17.5mm		12.7mm	
Image quality at 1064nm	Pulsed with trigger sync - excellent Pulsed with video trigger - good		Pulsed with trigger sync - excellent Pulsed with video trigger - good	
	CW - good		CW - good	
Operation mode	Quad Tap interline transfer CCD		CMOS, Global shutter	
PC interface	USB 3.0		GigE (POE)	
OS supported	Windows 7 (64) and Windows 10		Windows 10 (64) and Windows 11	
Compliance	CE, UKCA, China RoHS		CE, UKCA, China RoHS	
Ordering Information				
Supported software	Item	P/N	Item	P/N
BeamGage Professional	BGP-USB3-LT665	SP90378 (8)	BGP-G-SP504S	SP90618 ⁽⁹⁾
BeamGage Standard	BGS-USB3-LT665	SP90377 (8)	N/A	N/A
Accessories				

LBS-100 to SM2 Adapter SP98001 Notes: (1) The camera's natural response is from 340nm through 1100nm. To measure effectively below 340nm, please make use of one of our UV converters. Otherwise the sensitivity is too low and the measurement accuracy may degrade. Without UV converter, long term intensive irradiation at UV wavelengths, may cause permanent damage to the imager due to UV ablation.

(2) Highly dependent on PC processor and graphics adapter performance.

(3) Value is for 2x2 binning. When in full frame format, the maximum frame rate is 2 fps.

(4) For more information please see "Optical Camera Trigger" catalog page.

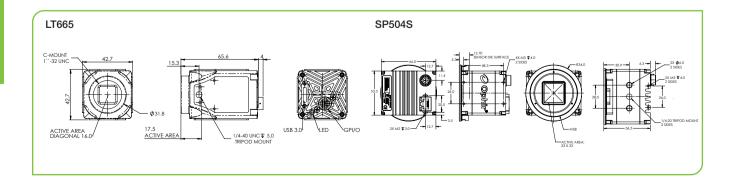
(5) Camera set to full resolution at maximum frame rate at 633nm CW wavelength. Camera set to minimum useful gain and 1 ms exposure time for saturation test and maximum useful gain and 35ms exposure time for lowest signal test.

(6) Values derived from camera EMVA data for Saturation Capacity at minimum exposure and Absolute Sensitivity at maximum exposure. When in the default configuration, the Saturation Intensity is 0.42 mW/cm² and the Lowest Measurable Signal is 0.05 nW/cm².

(7) 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.

(8) Comes with USB 3.0 cable, Power with Trigger cable, 5M2 adapter, and 3 ND filters.

(9) Comes with Cat6 cable, Power with Trigger cable, 5M2 adapter, and 3 ND filters.ND1, ND2, ND3 (ND3 mounted in camera)





SP98000