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Zyla sCMOS

Dynamically Image Cells with Breakthrough Precision and Clarity

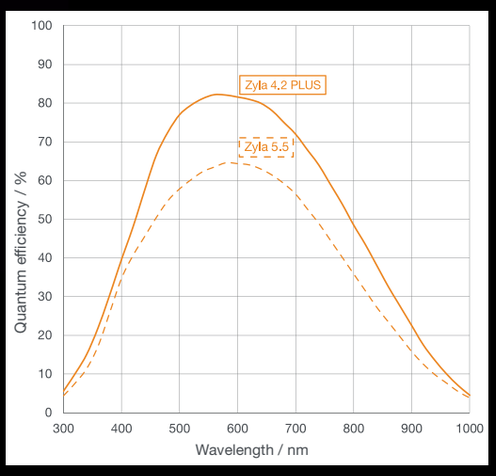
ZYLA 4.2 PLUS

- 4.2 megapixel sCMOS
- 82% QE, optimized for all fluorophores
- 0.9 e^- read noise
- 100 fps (53 fps USB 3.0)
- 33,000:1 dynamic range

ZYLA 5.5

- 5.5 megapixel sCMOS
- Rolling & True Global Shutter
- 0.9 e- read noise
- 100 fps (40 fps USB 3.0)
- 33,000:1 dynamic range

✓ QE Boosted to 82%
✓ Industry fastest USB 3.0 speeds
✓ >99.8 % Quantitative Linearity



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Technical Specifications

MODEL SPECIFIC SPECIFICATIONS

Model	Zyla 5.5			Zyla 4.2 PLUS	
Sensor type	Front Illuminated Scientific CMOS			Front Illuminated Scientific CMOS	
Active pixels (W x H)	2560 x 2160 (5.5 Megapixel)			2048 x 2048 (4.2 Megapixel)	
Sensor size	16.6 x 14.0 mm 21.8 mm diagonal			13.3 x 13.3 mm 18.8 mm diagonal	
Pixel size (W x H)	6.5 µm				
Pixel readout rate (MHz)	200 (100 MHz x 2 sensor halves) 560 (280 MHz x 2 sensor halves)			Slow Read 216 (108 MHz x 2 sensor halves) Fast Read 540 (270 MHz x 2 sensor halves)	
Read noise (e^-) Median [rms]		**Rolling Shutter**	**Global Shutter**		**Rolling Shutter**
	@ 200 MHz @ 560 MHz	0.9 [1.2] 1.2 [1.6]	2.3 [2.5] 2.4 [2.6]	@ 216 MHz @ 540 MHz	0.90 [1.1] 1.10 [1.3]
Maximum Quantum Efficiency	64%			82%	
Sensor Operating Temperature					
Air cooled	0°C (up to 30°C ambient)			0°C (up to 27°C ambient)	
Water cooled	-10°C*			-10°C*	
Dark current, e^-/pixel/sec @ min temp					
Air cooled	0.10			0.10	
Water cooled	0.019			0.019	
Readout modes	Rolling Shutter and True Global Shutter (Snapshot)			Rolling Shutter and Global Clear	
Maximum dynamic range	33,000:1			33,000:1	
Pixel well depth (e^-)	30,000				
Data range	12-bit (fastest USB 3.0 speeds) and 16-bit (maximum dynamic range)				
Interface options	USB 3.0 Camera Link 10-tap				

FRAME RATE TABLE - 12-BIT (16-BIT)

Array Size	Zyla 5.5 USB 3.0		Zyla 5.5 10-tap		Zyla 4.2 PLUS 10-tap	Zyla 4.2 PLUS USB 3.0
	Rolling Shutter	Global Shutter	Rolling Shutter	Global Shutter	Rolling Shutter	Rolling Shutter
2560 x 2160	40 (30)	40 (30)	100 (75)	49 (49)	-	-
2048 x 2048	53 (40)	52 (39)	105 (98)	52 (52)	101 (101)	53 (40)
1920 x 1080	107 (80)	98 (80)	200 (200)	97 (97)	192 (192)	107 (80)
512 x 512	422 (422)	201 (201)	422 (422)	201 (201)	406 (406)	406 (406)
128 x 128	1691 (1691)	716 (716)	1691 (1691)	716 (716)	1627 (1627)	1627 (1627)

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