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ZEPHIR 1.7
INFRARED CAMERA

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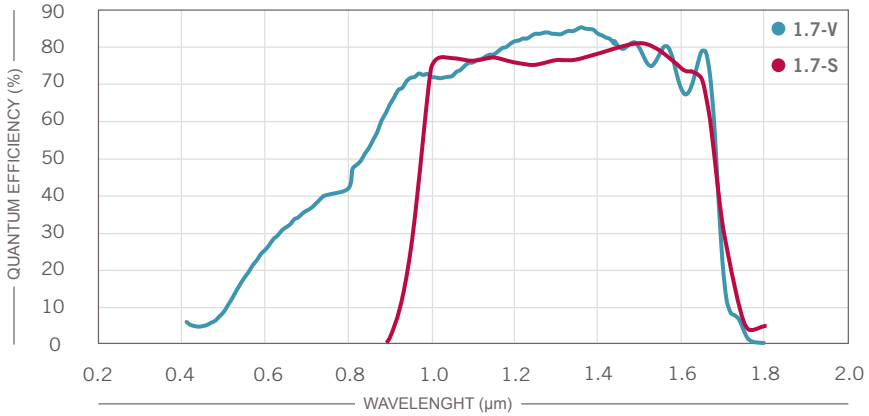
ZephIR™ 1.7 is Photon etc.'s affordable scientific-grade near-infrared InGaAs camera, highly sensitive from 0.9 to 1.7 µm. A four-stage TE cooler, air-deep-cooling at -80°C, provides unrivalled low-noise levels at a 200 frame-per-second rate. Either it is for fluorescent markers (dyes or NP) in small animals, OCT, acoustic fields mapping, semiconductor analysis or solar cells characterization, ZephIR™ 1.7 extends the boundaries of laboratory and industrial imaging.

* Export licence may be required for this item

TECHNICAL SPECIFICATIONS	ZEPHIR 1.7-V			ZEPHIR 1.7-S		
Focal Plane Array (FPA)	InGaAs			InGaAs		
FPA size	640 x 512			640 x 512		
Pixel size	15 µm			15 µm		
Spectral range	**0.5 - 1.7 µm** ~ 0.5 - 1.69 µm @ 25 °C (>70% 0.95 - 1.62µm) ~ 0.5 - 1.63 µm @ -80 °C (>70% 0.9 - 1.5 µm)			**~ 0.9 - 1.69 µm @ 25 °C** (>70% 1 - 1.6 µm) **~ 0.9 - 1.62 µm @ -80 °C**		
Dark Current	150 ē/p/s *(No thermal emission from target and sensor at -80 °C)* 300 ē/p/s *(target at room temperature and sensor at -80 °C)*					
	High Gain	***Med Gain***	***Low Gain***	***High Gain***	***Med Gain***	***Low Gain***
Gain Setting	28 ē/ADU	28 ē/ADU	130 ē/ADU	2.2 ē/ADU	7.4 ē/ADU	89 ē/ADU
Readout Noise	50 ē	150 ē	800 ē	35 ē	75 ē	350 ē
Full Well Capacity	12 kē	900 kē	4.2 Mē	39 kē	131 kē	1.6 Mē
Peak responsivity	1.1 A/W @ 1660 nm			1.0 A/W @ 1550 nm		
Quantum Efficiency	Up to 85%			> 70%		
Operability (typical)	> 99%			> 99.5%		
Digitization	13 bits	15 bits	15 bits	14 bits		
Full Frame Rate	220 fps			170 fps		
Integration Time Range	1 µs to 19 minutes			1 µs to 19 minutes		
Readout Modes	CDS	ITR	ITR	ITR, IWR, CDS, IMRO		
Cooling	TEC 4 stages, forced air			TEC 4 stages, forced air		
FPA Operating Temperature	-80 °C			-80 °C		
Cool Down Time	< 7 minutes			< 10 minutes		
Ambient Temperature Range	10 °C to 35 °C			10 °C to 35 °C		
Cold Shield	f#/1.5			f#/1.5		
Computer Interface	CameraLink™			CameraLink™		
External Control	On demand			On demand		
Power Supply Requirement	12 VDC @ 5A			12 VDC @ 5A		
Physical Dimensions	169 x 130 x 97.25 mm			169 x 130 x 97.25 mm		
Weight	2.6 kg			2.6 kg		
Certification	CE			CE		



Quantum efficiency presented at 25°C.
The cut-off wavelength shifts towards the blue by ~ 7nm for every 10°C of cooling.

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TECHNICAL SPECIFICATIONS	ZEPHIR 1.7-V			ZEPHIR 1.7-S			ZEPHIR 2.5		ZEPHIR 2.9	
Focal Plane Array (FPA)	InGaAs			InGaAs			HgCdTe		HgCdTe	
FPA size	640 x 512			640 x 512			320 x 256		320 x 256	
Pixel size	15 µm			15 µm			30 µm		30 µm	
Spectral range	**0.5 - 1.7 µm** ~ 0.5 - 1.69 µm @ 25 °C (>70% 0.95 - 1.62µm) ~ 0.5 - 1.63 µm @ -80 °C (>70% 0.9 - 1.5 µm)			**~ 0.9 - 1.69 µm @ 25 °C** (>70% 1 - 1.6 µm) **~ 0.9 - 1.62 µm @ -80 °C**			0.85 - 2.5 µm		0.85 - 2.9 µm	
Dark Current	150 ē/p/s *(No thermal emission from target and sensor at -80 °C)* 300 ē/p/s *(target at room temperature and sensor at -80 °C)*						4.8 pA or 30 Mē/p/s *(measured with a target at room temperature and sensor at -80 °C)*		54 pA or 340 Mē/p/s *(measured with a target at room temperature and sensor at -80 °C)*	
Gain Setting	***High Gain*** 28 ē/ADU	***Med Gain*** 28 ē/ADU	***Low Gain*** 130 ē/ADU	***High Gain*** 2.2 ē/ADU	***Med Gain*** 7.4 ē/ADU	***Low Gain*** 89 ē/ADU	***High Gain*** 10.30 ē/ADU	***Low Gain*** 216 ē/ADU	***High Gain*** 10.30 ē/ADU	***Low Gain*** 216 ē/ADU
Readout Noise	50 ē	150 ē	800 ē	35 ē	75 ē	350 ē	150 ē	1650 ē	150 ē	1650 ē
Full Well Capacity	12 kē	900 kē	4.2 Mē	39 kē	131 kē	1.6 Mē	168 kē	3.5 Mē	168 kē	3.5 Mē
Peak responsivity	1.1 A/W @ 1660 nm			1.0 A/W @ 1550 nm			1.8 A/W @ 2450 nm		1.56 A/W @ 2700 nm	
Quantum Efficiency	Up to 85%			> 70%			Up to 85%		Up to 85%	
Operability (typical)	> 99%			> 99.5%			> 98.5%		> 98.5%	
Digitization	13 bits	15 bits	15 bits	14 bits			14 bits		14 bits	
Full Frame Rate	220 fps			170 fps			Up to 340 fps		Up to 340 fps	
Integration Time Range	1 µs to 19 minutes			1 µs to 19 minutes			1 µs to 100 ms		1 µs to 10 ms	
Readout Modes	CDS	ITR	ITR	ITR, IWR, CDS, IMRO			ITR		ITR	
Cooling	TEC 4 stages, forced air			TEC 4 stages, forced air			TEC 4 stages, forced air		TEC 4 stages, forced air	
FPA Operating Temperature	-80 °C			-80 °C			-80 °C		-80 °C	
Cool Down Time	< 7 minutes			< 10 minutes			10 minutes		10 minutes	
Ambient Temperature Range	10 °C to 35 °C			10 °C to 35 °C			10 °C to 35 °C		10 °C to 35 °C	
Cold Shield	f#/1.5			f#/1.5			f#/1.5		f#/1.5	
Computer Interface	CameraLink™			CameraLink™			CameraLink™		CameraLink™	
External Control	On demand			On demand			On demand		On demand	
Power Supply Requirement	12 VDC @ 5A			12 VDC @ 5A			12 VDC @ 5A		12 VDC @ 5A	
Physical Dimensions	169 x 130 x 97.25 mm			169 x 130 x 97.25 mm			169 x 130 x 97.25 mm		169 x 130 x 97.25 mm	
Weight	2.6 kg			2.6 kg			2.6 kg		2.6 kg	
Certification	CE			CE			CE		CE	

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