Photon etc
A spectrum of solutions

5795 DE GASPE AVENUE, #222
MONTREAL, QUEBEC, H2S 2X3
CANADA

ZEPHIR 1.7
INFRARED CAMERA

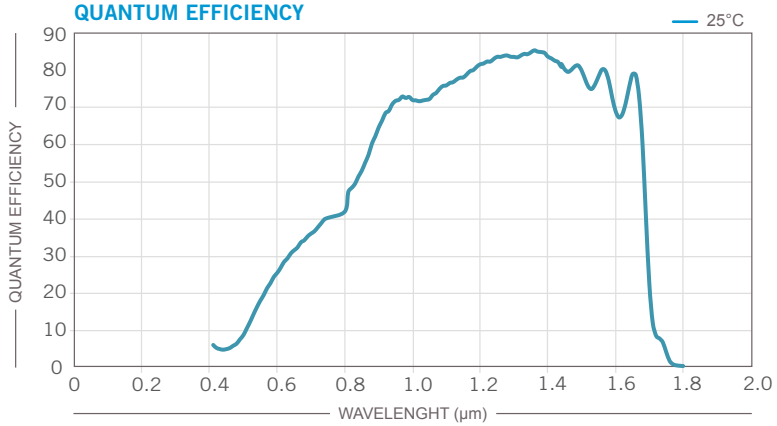
Continuing its push to extend the boundaries of scientific and industrial imaging, Photon etc. presents its high performance, yet affordable, deep-cooled SWIR camera line. Based on a sensitive InGaAs FPA, and integrating a four-stage TE cooler, ZephIR 1.7 deliver an astounding 350 frame-per-second rate while reaching very low noise levels. First designed for demanding faint-flux applications such as small animal imaging in the second biological window, these cameras also bring new capabilities for industrial applications in quality control and sorting.

* Export licence may be required for this item.

TECHNICAL SPECIFICATIONS

Focal Plane Array (FPA)	InGaAs	
FPA size	640 x 512	
Pixel size	15 µm	
Spectral range	0.5-1.7 µm *(optimized for 0.8 - 1.7 µm)* ~ 0.8 - 1.69 µm @ 25 °C ~ 0.8 - 1.62 µm @ -80 °C	
Dark Current	150 ē/p/s *(intrinsec dark current of the sensor at -80 °C)* 300 ē/p/s *(measured with a target at room temperature and sensor at -80 °C)*	
	High Gain	***Low Gain***
Gain Setting	28 ē/ADU	130ē/ADU
Readout Noise	150 ē	800 ē
Full Well Capacity	900 Kē	4.2Mē
Peak responsivity	-	
Quantum Efficiency	Up to 85%	
Operability (typical)	>99%	
Digitization	15 bits	
Full Frame Rate (FPS)	200 fps	
Integration Time Range	1 µs to 19 minutes	
Readout Modes	ITR	
Cooling	TEC 4 stages, forced air	
FPA Operating Temperature	-80 °C	
Cool Down Time	10 minutes	
Ambient Temperature Range	10 °C to 35 °C	
Cold Shield	f#/2.0	
Computer Interface	CameraLink™	
External Control	On demand	
Power Supply Requirement	12 VDC @ 5A	
Physical Dimensions	169 mm x 130 mm x 97.25 mm	
Weight	2.6 kg	
Certification	CE	

QUANTUM EFFICIENCY



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		ZEPHIR 2.5		ZEPHIR 2.9	
Focal Plane Array (FPA)	InGaAs		HgCdTe		HgCdTe	
FPA size	640 x 512		320 x 256		320 x 256	
Pixel size	15 µm		30 µm		30 µm	
Spectral range	0.5-1.7 µm (optimized for 0.8 - 1.7 µm) ~ 0.8 - 1.69 µm @ 25 °C ~ 0.8 - 1.62 µm @ -80 °C		0.85-2.5 µm		0.85-2.9 µm	
Dark Current	-150 (ē/p/s) *(intrinsec dark current of the sensor at -80 °C)* -300 (ē/p/s) *(measured with a 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	***Low Gain*** 130ē/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	150 ē	800 ē	150 ē	1650 ē	57ē	
Full Well Capacity	900 Kē	4.2Mē	168 Kē	3.5 Mē	168 Kē	3.5 Mē
Peak responsivity			1.8 A/W @ 2450 nm		1.56 A/W @ 2700 nm	
Quantum Efficiency	Up to 85%		Up to 85%		Up to 85%	
Operability (typical)	>99%		>98.5%		>98.5%	
Digitization	15 bits		14 bits		14 bits	
Full Frame Rate (FPS)	200 fps		Up to 345 fps		Up to 345 fps	
Integration Time Range	1 µs to 19 minutes		1 µs to 100 ms		1 µs to 10 ms	
Readout Modes	ITR		ITR		ITR	
Cooling	TEC 4 stages, forced air		TEC 4 stages, forced air		TEC 4 stages, forced air	
FPA Operating Temperature	-80 °C		-80 °C		-80 °C	
Cool Down Time	10 minutes		10 minutes		10 minutes	
Ambient Temperature Range	10 °C to 35 °C		10 °C to 35 °C		10 °C to 35 °C	
Cold Shield	f#/2.0		f#/2.0		f#/2.0	
Computer Interface	CameraLink™		CameraLink™		CameraLink™	
External Control	On demand		On demand		On demand	
Power Supply Requirement	12 VDC @ 5A		12 VDC @ 5A		12 VDC @ 5A	
Physical Dimensions	169 mm x 130 mm x 97.25 mm		169 mm x 130 mm x 97.25 mm		169 mm x 130 mm x 97.25 mm	
Weight	2.6 kg		2.6 kg		2.6 kg	
Certification	CE		CE		CE	

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