



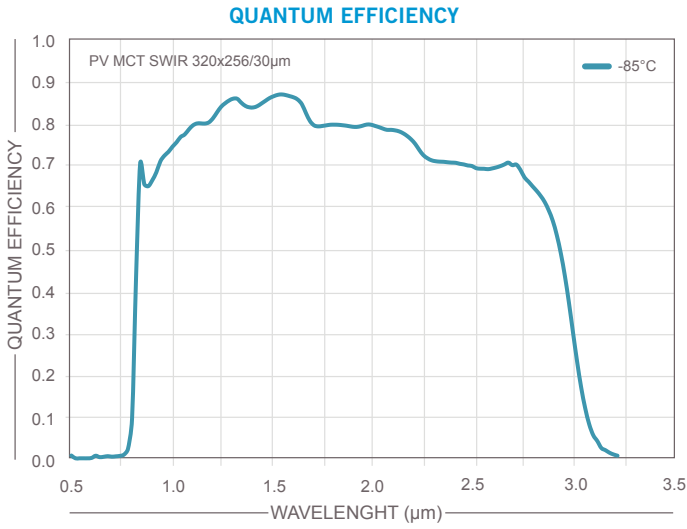
ZEPHIR™ CAMERA

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 sensitive InGaAs and HgCdTe (MCT) FPAs, and integrating a four-stage TE cooler, ZephIR™ cameras deliver an astounding 345 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.

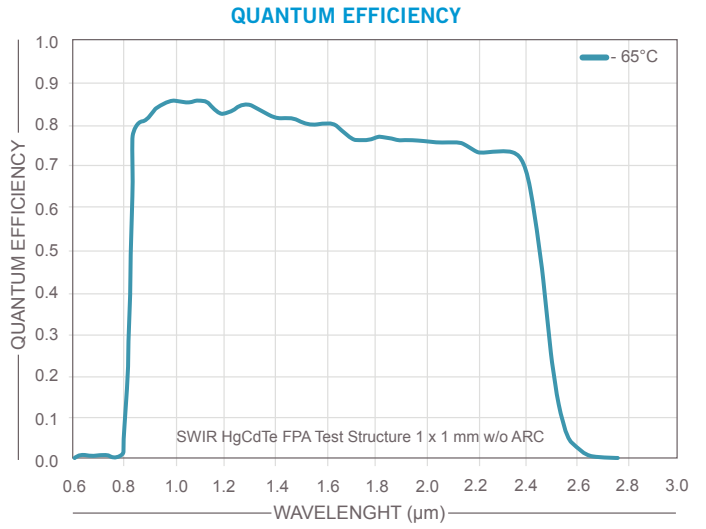
TECHNICAL SPECIFICATIONS	ZEPHIR 1.7	ZEPHIR 2.5	ZEPHIR 2.9
Focal Plane Array (FPA)	InGaAs	HgCdTe	HgCdTe
FPA size	640 x 512	320 x 256	320 x 256
Pixel size	15 μm	30 μm	30 μm
Spectral range	0.5-1.7 μm (optimized for 0.8 - 1.7 μm)	0.85-2.5 μm	0.85-2.9 μm
Dark Current	300 ($\text{e}^-/\text{p/s}$)	4.8 pA or 30 M $\text{e}^-/\text{p/s}$	54 pA or 340 M $\text{e}^-/\text{p/s}$
Gain Setting (high, low)	0.366 e^-/ADU , 18.31 e^-/ADU	10.30 e^-/ADU , 216 e^-/ADU	10.30 e^-/ADU , 216 e^-/ADU
Readout Noise	45 e^- (high gain), 180 e^- (low gain)	57 e^- @ 345 FPS (high gain)	57 e^- @ 345 FPS (high gain)
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%
Full Well Capacity (high gain, low gain)	12 K e^- , 600 K e^-	168 K e^- , 3.5 M e^-	168 K e^- , 3.5 M e^-
Dynamic Range	13/15 bits	14 bits	14 bits
Full Frame Rate (FPS)	350 fps (13 bits) or 120 fps (15 bits)	Up to 345 fps	Up to 345 fps
Integration Time Range	1 μs to minutes	1 μs to 100 ms	1 μs to 10 ms
Readout Modes	ITR, IWR, LNIM	ITR, IWR	ITR, IWR
Cooling	TEC 4 stages, forced air	TEC 4 stages, forced air	TEC 4 stages, forced air
FPA Operating Temperature	-80 $^{\circ}\text{C}$	-80 $^{\circ}\text{C}$	-80 $^{\circ}\text{C}$
Cool Down Time	3 minutes	3 minutes	3 minutes
Ambient Temperature Range	0 $^{\circ}\text{C}$ to 40 $^{\circ}\text{C}$	0 $^{\circ}\text{C}$ to 40 $^{\circ}\text{C}$	0 $^{\circ}\text{C}$ to 40 $^{\circ}\text{C}$
Cold Shield	Yes	Yes	Yes
Computer Interface	CameraLink™ (dual), USB3.0	CameraLink™, USB3.0	CameraLink™, USB3.0
External Control	In/Out TTL	In/Out TTL	In/Out TTL
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	4 Kg	4 Kg	4 Kg
S/N ratio		65 dB	65 dB

* Export licence may be required for these items.

ZEPHIR 2.9



ZEPHIR 2.5



ZEPHIR 1.7

