Photon etc
A spectrum of solutions

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

ZEPHIR 2.9
INFRARED CAMERA

ZephIR™ 2.9 is the only scientific-grade short-wave infrared HgCdTe (MCT) camera, ranging from 0.85 to 2.9 µm. A four-stage TE deep-cooler, forced air-cooling at -80°C, provides unrivaled low-noise levels at a 340 frame-per-second rate. Either it is for borehole samples analysis, pipeline gas detection, astronomy, space observation or material sorting, ZephIR™ 2.9 extends the boundaries of laboratory and industrial imaging.

* Export licence may be required for this item.

TECHNICAL SPECIFICATIONS

Focal Plane Array (FPA)	HgCdTe	
FPA size	320 x 256	
Pixel size	30 µm	
Spectral range	0.85 - 2.9 µm	
Dark Current	< 340 Mē/px/s *(measured with a target at 21°C and sensor at -80°C)*	
	High Gain	***Low Gain***
Gain Setting	10.30 ē/ADU	216 ē/ADU
Readout Noise	150 ē	980 ē
Full Well Capacity	160 Kē	3.3 Mē
Readout Modes	ITR	
Digitization	14 bits	
Full Frame Rate (Camera Link)	Up to 340 full frame *4500 for a (32x32) px ROI*	
Peak responsivity	1.56 A/W @ 2700 nm	
Quantum Efficiency	Up to 85%	
Operability (typical)	> 98.5% - up to 99.8%	
Integration Time Range	1 µs to 10 ms (low gain)	
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#/1.4	
Software	PHySpec™ control and analysis software included	
Computer Interface	CameraLink™ or USB 3.0	
External Control	On demand	
Power Supply Requirement	12 VDC @ 5A	
Physical Dimensions	169 x 130 x 97.25 mm	
Weight	2.6 kg	
Certification	CE	

MAIN ADVANTAGES OF TE COOLED AIR SYSTEM

- › Compact
- › Highly reliable
- › Long lifetime
- › No maintenance
- › Low dark current
- › Low readout noise

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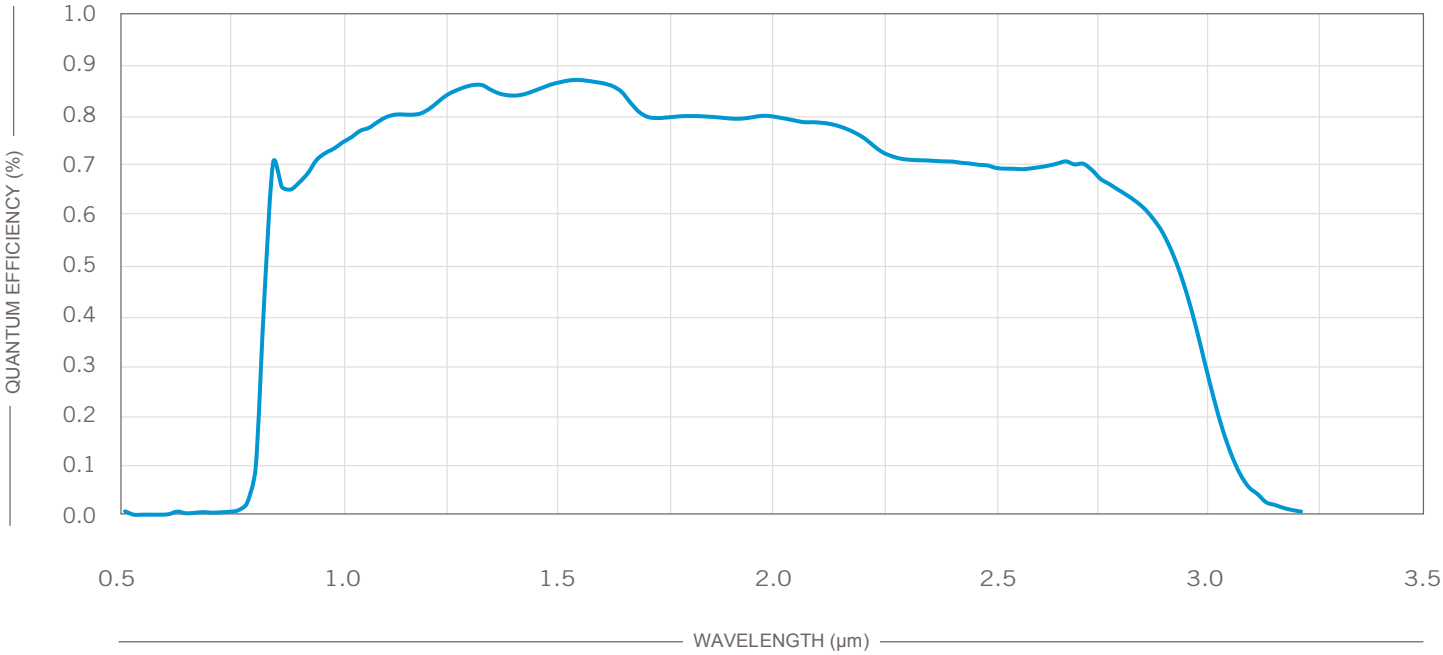
QUANTUM EFFICIENCY



● -85°C PV MCT SWIR 320x256/30µm

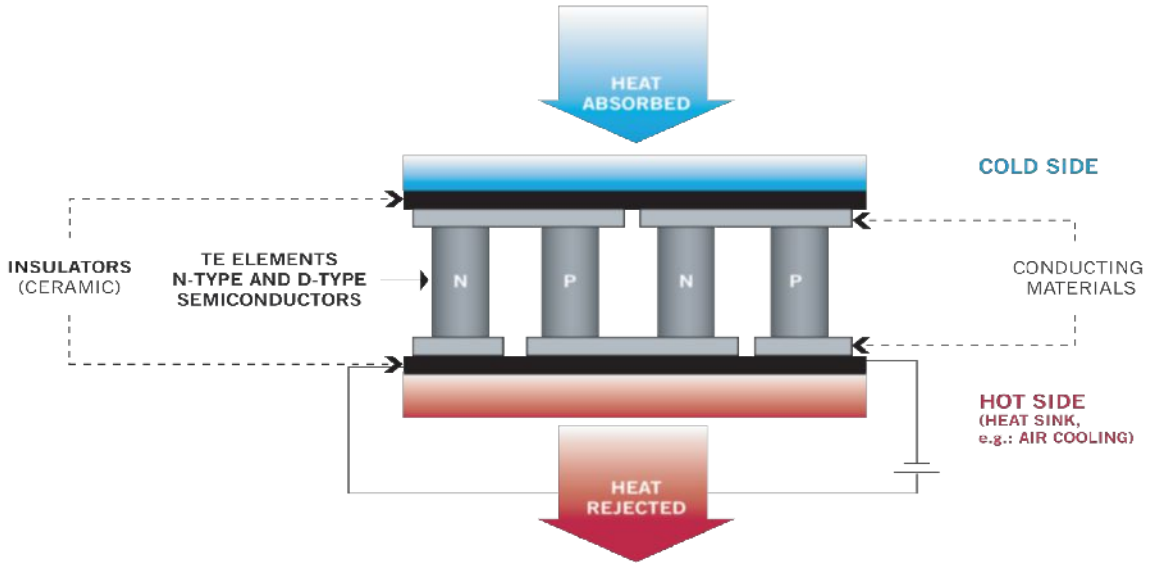


FIG. 1. Schematic of a thermoelectric device where the Peltier effect is used to generate heat flow between two materials.

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