

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

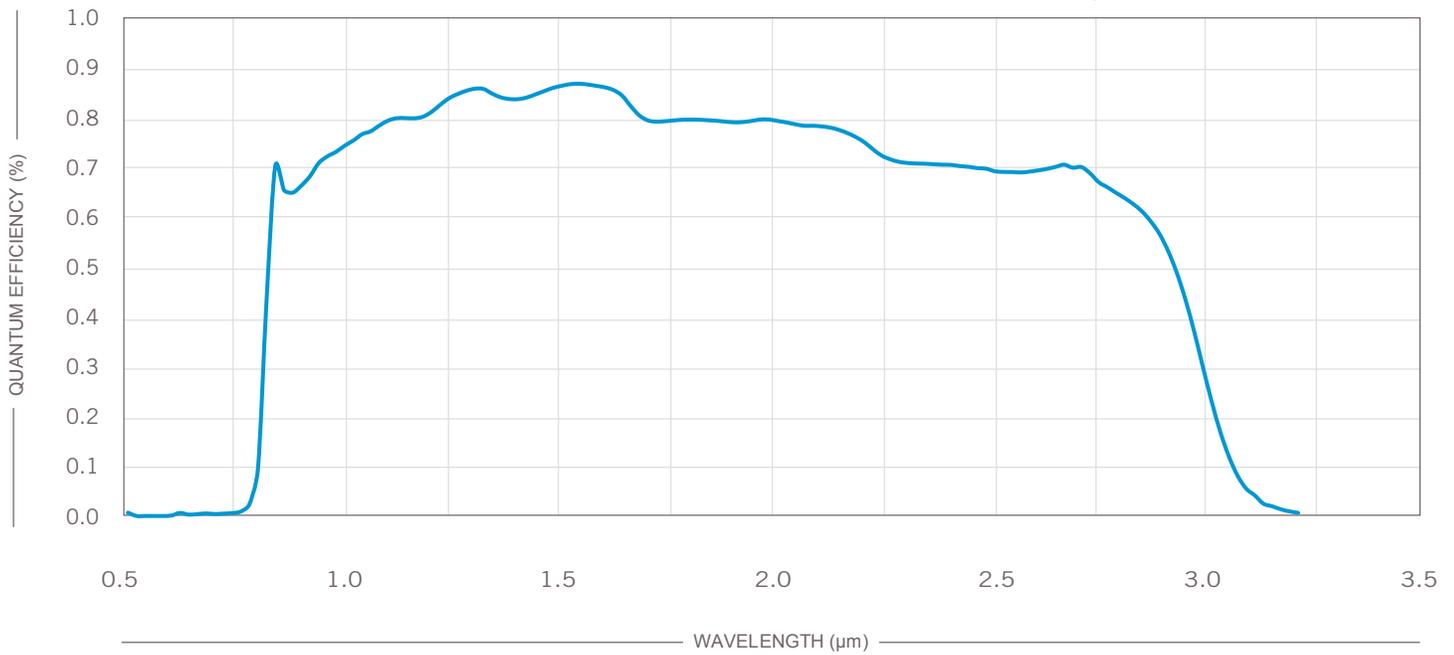
Focal Plane Array (FPA)	HgCdTe	
FPA size	320 x 256	
Pixel size	30 μm	
Spectral range	0.85 - 2.9 μm	
Dark Current	< 340 $\text{Me}/\text{px}/\text{s}$ <i>(measured with a target at 21 °C and sensor at -80 °C)</i>	
Gain Setting	High Gain 10.30 e/ADU	Low Gain 216 e/ADU
Readout Noise	150 e	980 e
Full Well Capacity	160 Ke	3.3 Me
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
- > No maintenance
- > Highly reliable
- > Low dark current
- > Long lifetime
- > Low readout noise



QUANTUM EFFICIENCY



● -85°C

PV MCT SWIR 320x256/30μm

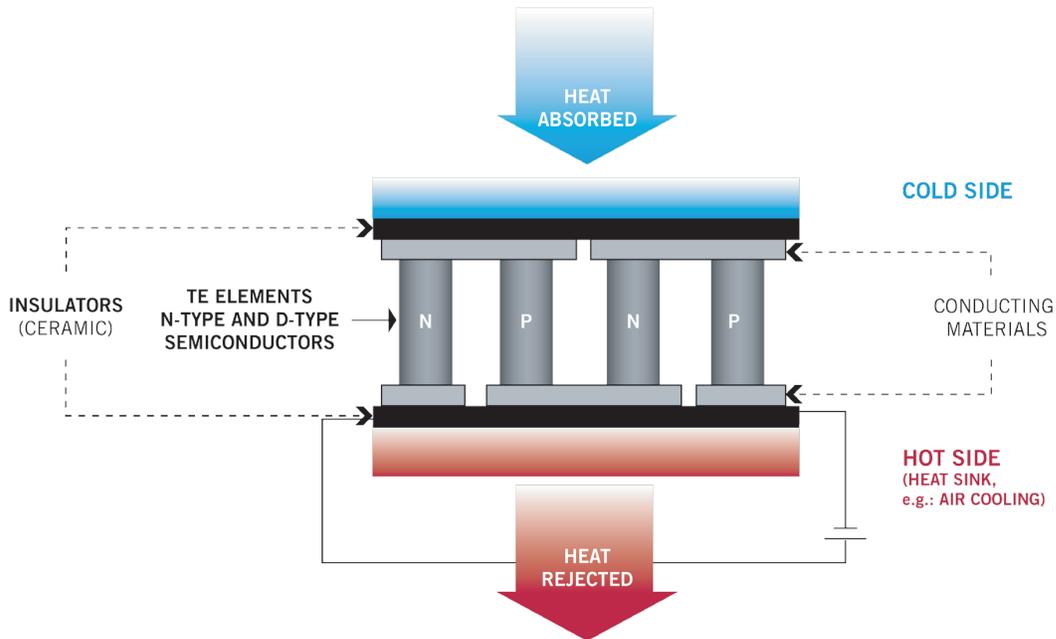


FIG. 1. Schematic of a thermoelectric device where the Peltier effect is used to generate heat flow between two materials.