

ZEPHIR 1.7S

INFRARED CAMERA



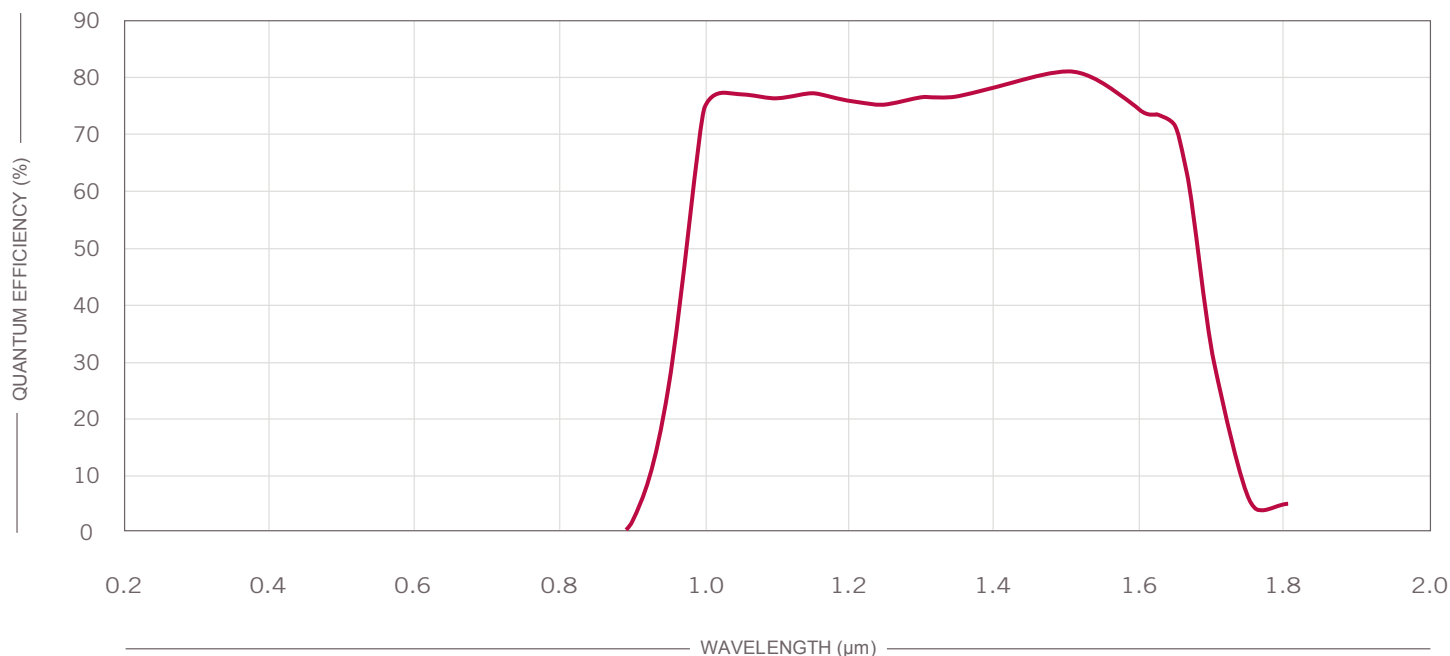
ZephIR™ 1.7S is Photon etc.'s scientific-grade near-infrared InGaAs camera, boasting a high sensitivity from 0.9 to 1.7 μm . A four-stage TE cooler, deep-cooling at -80°C , provides unrivalled low-noise levels at an astounding 220 frames-per-second rate. Either it is for fluorescent markers (dyes, nanoparticles or quantum dots) in small animals, Indepth biological sample imaging, semiconductor analysis or solar cells characterization, ZephIR™ 1.7S extends the boundaries of laboratory imaging.

* Export licence may be required for this item.

TECHNICAL SPECIFICATIONS		ZEPHIR 1.7-S		
Focal Plane Array (FPA)	InGaAs			
FPA size	640 x 512			
Pixel size	15 μm			
Spectral range	0.9 - 1.7 μm (~ 0.9-1.69 μm @ 25 °C) (~ 0.9-1.62 μm @ -80 °C)			
Dark Current	<div>< 300 - Typ. ~250 e/px/s (Target at 21°C and sensor at -80°C)</div> <div>< 150 - Typ. ~ 125 e/px/s (No thermal emission from target and sensor at -80 °C)</div>			
	High Gain	Med Gain	Low Gain	
Gain Setting (e/ADU)	2.1	7.4	89	
Readout Noise (e)	30	75	350	
Full Well Capacity	27 ke	110 ke	1.4 Me	
Readout Modes	ITR, IWR, CDS, IMRO			
Digitization	14 bits			
Frame Rate with CameraLink (fps)	220			
Peak responsivity	1.0 A/W @ 1550 nm			
Quantum Efficiency	> 70% from 1.0 to 1.6 μm			
Operability (typical)	> 99.5%			
Integration Time Range	1 μs to 19 minutes (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



● **ZEPHIR 1.7-S**

Quantum efficiency presented at 25°C.

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

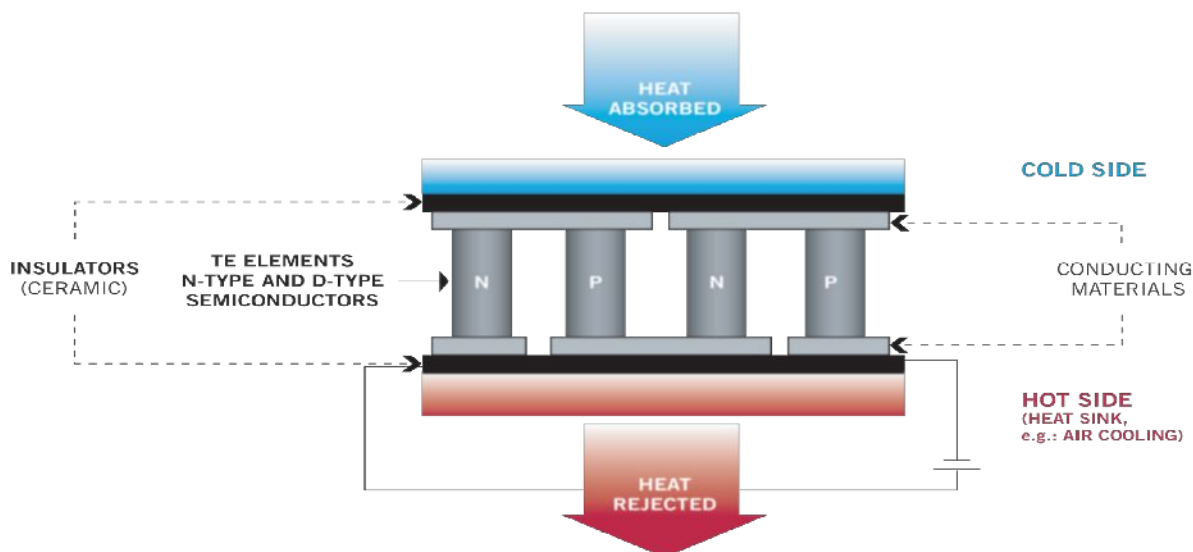


FIG. 1. Schematic of a thermoelectric device where the Peltier effect is used to generate heat flow between two materials.

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