

# Alizé 1.7™

## INFRARED CAMERA



The Alizé 1.7 is a high-end, scientific grade, 640 x 512 pixels resolution, InGaAs camera that marries performance with reliability. It has low noise levels, high efficiency, and a rapid frame rate compatible with an external trigger. This is made possible by a combination of state-of-the-art control electronics and a four stage thermoelectric cooler (TEC) which can maintain an operating temperature as low as -50 °C. The TEC, in turn, uses forced air cooling which requires none of the maintenance of a water or liquid nitrogen chilled unit.

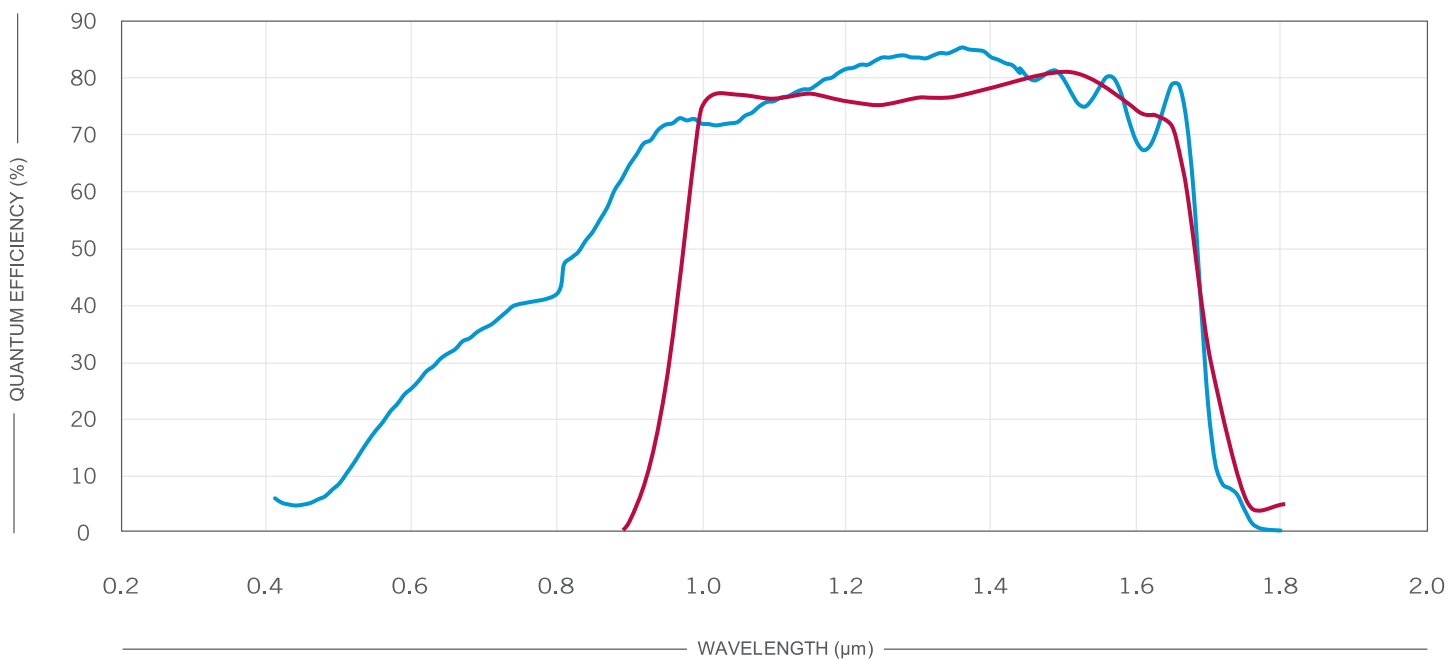
The Alizé 1.7 is amongst the most cost-effective high-end InGaAs cameras on the market.

### TECHNICAL SPECIFICATIONS

	Alizé 1.7v			Alizé 1.7s		
Focal plane array (FPA)	InGaAs			InGaAs		
FPA size (px)	640 x 512			640 x 512		
Pixel size (µm)	15			15		
Spectral range (QE > 10%)	0.51 - 1.71 µm at 25 °C 0.46 - 1.66 µm at -50 °C			0.95 - 1.70 µm at 25 °C 0.91 - 1.64 µm at -50 °C		
FPA operating temperature	-50 °C			-50 °C		
Dark current (sensor at -50 °C)	Target at 21 °C: < 600 (Typ. ~ 500) e/px/s			Target at 21 °C: < 600 e/px/s		
	High	Med	Low	High	Med	Low
Gain setting (ē/adu)	2.8	28	130	2.2	7.4	89
Typical readout noise (ē)	50	150	800	35	75	350
Full well capacity (kē)	12	800	3500	27	110	1400
Readout modes	CDS	ITR	ITR	ITR, IWR, CDS		
Digitization (bits)	13	15	15	14		
Frame rate in CameraLink™ (fps)	90	190	190	Up to 240 full frame 1900 for a 64x64 px ROI		
Frame rate in USB 3.0 (fps)	185			Up to 250 full frame 1900 for a 128x128 px ROI		
Peak responsivity	1.1 A/W at 1660 nm			1.0 A/W at 1550 nm		
Quantum efficiency	> 70% 0.95 - 1.67 µm at 25 °C > 70% 0.89 - 1.62 µm at -50 °C			> 70% 1.00 - 1.65 µm at 25 °C > 70% 0.96 - 1.59 µm at -50 °C		
Operability (typical)	> 99%			> 99%		
Integration time range	1 µs to 19 minutes (low gain)			1 µs to 19 minutes (low gain)		
Cooling	TEC 4 stages, forced air			TEC 4 stages, forced air		
Cooldown time	< 10 minutes			< 10 minutes		
Ambient temperature range	10 °C to 35 °C			10 °C to 30 °C		
Cold shield	f#/1.4			f#/1.4		
Software	PC (Windows10 - 64-bits) with PhySpec™ control and analysis software					
Computer interface	CameraLink™ or USB 3.0			CameraLink™ or USB 3.0		
External control	Upon Request			Upon Request		
Power consumption on 12V DC (W)	39 (typ. 23)			33 (typ. 20)		
Dimensions	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		
Certification	CE			CE		

### MAIN ADVANTAGES OF TE COOLED AIR SYSTEM:

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

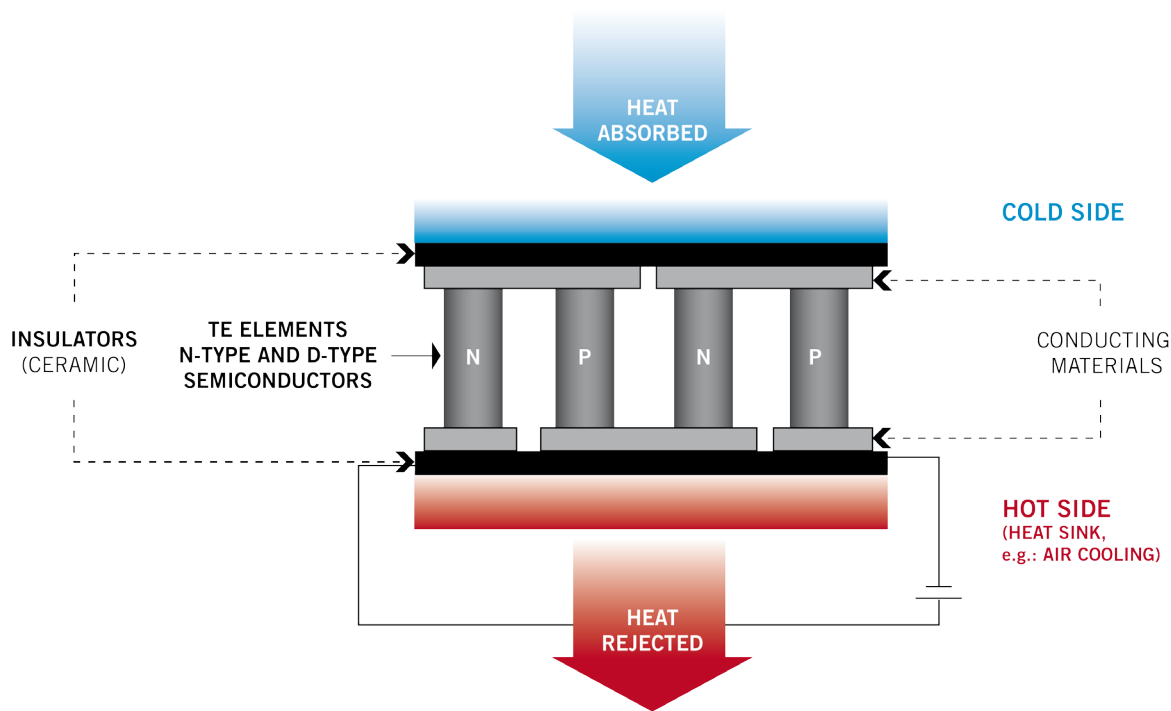


○ Alizé 1.7v

○ Alizé 1.7s

Quantum efficiency presented at 25°C.

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



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