

InGaAs FPA 640x512

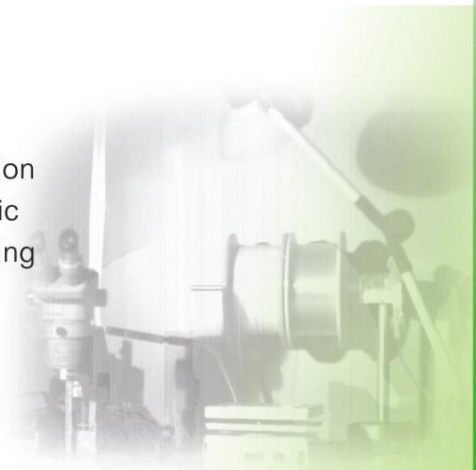
The InGaAs focal plane array is the optimized solution for near-infrared imaging and imaging spectrography applications in 900nm to 1700nm wavelength range especially under uncooled condition. The core technology of CLPT implements the InGaAs FPA with excellent quality. The sensitivity can be further increases by using the embedded TEC. High reliability is achieved by the hermetic metal package.

Features

- 640x512 array format
- 25um pixel pitch
- Kovar metal, 1 stage TEC
- Low dark current
- High quantum efficiency
- High operability

Applications

- Near-infrared imaging
- Hyper spectrum
- Covert surveillance
- Semiconductor inspection
- Astronomy and scientific
- Industrial thermal imaging



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Specifications of FPA-640x512

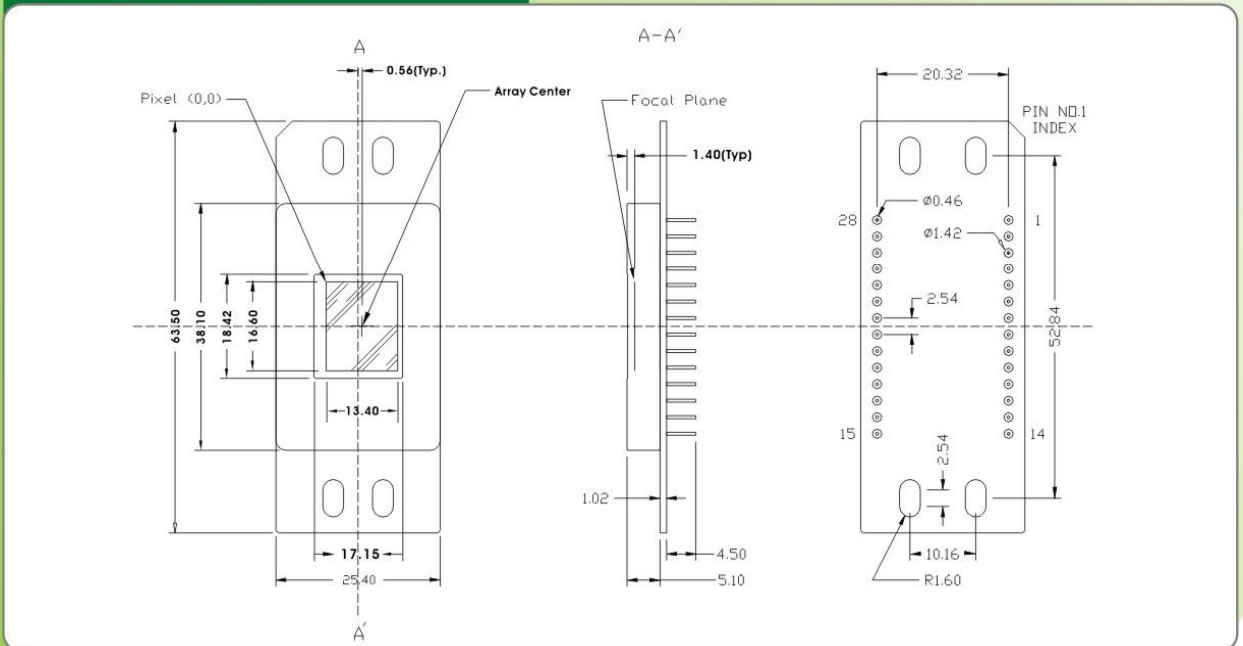
Absolute Maximum Ratings

Parameter	Unit	Min	Max
Operation Temperature	°C	-20	+85
Storage Temperature	°C	-40	+85
Power Consumption	mW	---	325
TEC current	A	---	1.8
TEC voltage	Volt	---	15.4

FPA Characteristics

Parameter	Typical	Conditions
Spectral response	0.9um-1.7um	—
Minimum Pixel Operability	>99%	Within 636x508 center region
Dark current	< 0.2pA	25°C, 0.1V detector bias
Quantum efficiency	> 70%	$\lambda = 1.0\mu\text{m}-1.6\mu\text{m}$
Detectivity	$\geq 5 \times 10^{11}$ Jones	25°C, $\lambda = 1.55\mu\text{m}$, $T_{\text{int}} = 16\text{ms}$, High Gain
Response nonuniformity	< 10%	under 50% saturation, 25°C
Nonlinearity(max.deviation)	< 2%	over 15%-85% full well capacity, low gain mode
Max.pixel rate	10MHz	---
GAIN	High: 32.3 uV/e ⁻ Low: 1.2 uV/e ⁻	25 °C
TEC coling	$\Delta T > 70^\circ\text{C}$	without loading

Package Outline



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