

InGaAs Focal Plane Array

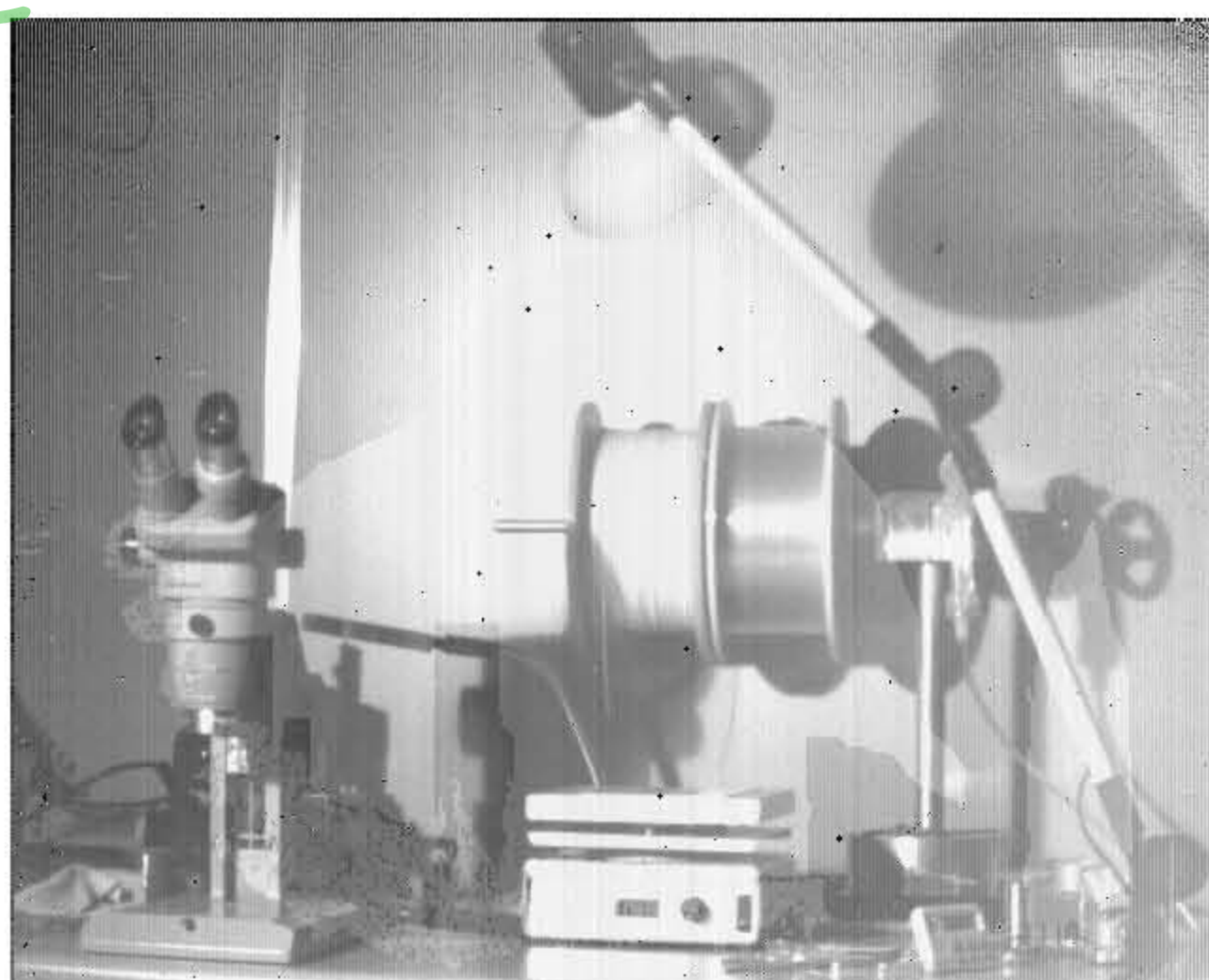
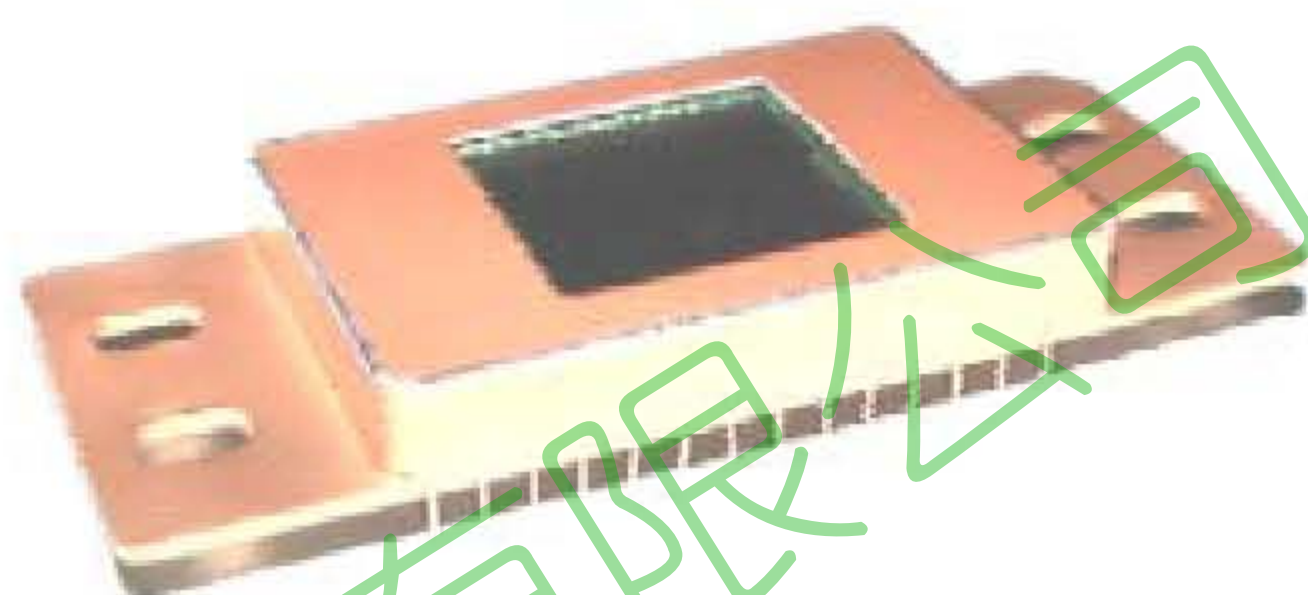
The InGaAs focal plane arrays are designed for near-infrared imaging and imaging spectroscopy applications in 900nm to 1700nm wavelength range. Owing to the small pixel leakage, uncooled operation is one of its remarkable features. The CLPT's FPA now is available in 640x512 array format with 25um pixel pitch and packaged inside a 28pin DIP Kovar case.

■ Features

- 640x512 array format
- 28 pin DIP, one-stage TE cooler
- Room temperature operation
- Typical pixel operability > 99%
- Quantum efficiency > 70% in 1000nm-1600nm

■ Applications

- Near-infrared imaging
- Imaging spectroscopy
- Covert surveillance
- Semiconductor inspection
- Medical science and biology
- Fiberoptic telecommunication
- Astronomy and scientific
- Industrial thermal imaging



Specifications of FPA-320x256-C

Absolute Maximum Ratings

Parameter	Unit	Min	Max
Operation Temperature	°C	-20	85
Storage Temperature	°C	-40	85
Power Consumption	mW	---	325

FPA Characteristics

Parameter	Typical	Conditions
Array size	640 x 512 pixels	---
Pixel pitch	25um	---
Spectral response	0.9um-1.7um	---
Operability	>99%	---
Dark current	< 1pA	25°C
Quantum efficiency	> 70%	$\lambda=1.0\mu\text{m}-1.6\mu\text{m}$
Detectivity	$\geq 5 \times 10^{11}$ Jones	25°C, $\lambda=1.55\mu\text{m}$, $T_{\text{int}}=16\text{ms}$, GAIN=13.3uV/e ⁻
Response nonuniformity	< 10%	under 50% saturation
Nonlinearity (max. deviation)	< 2%	over 10%-90% full well capacity
Max. pixel rate	10MHz	---
GAIN	High: 32.3 uV/e ⁻ Low: 1.2 uV/e ⁻	25°C

Package Outline

