

# InGaAs Focal Plane Array

## 《砷化銦鎵共焦平面陣列》

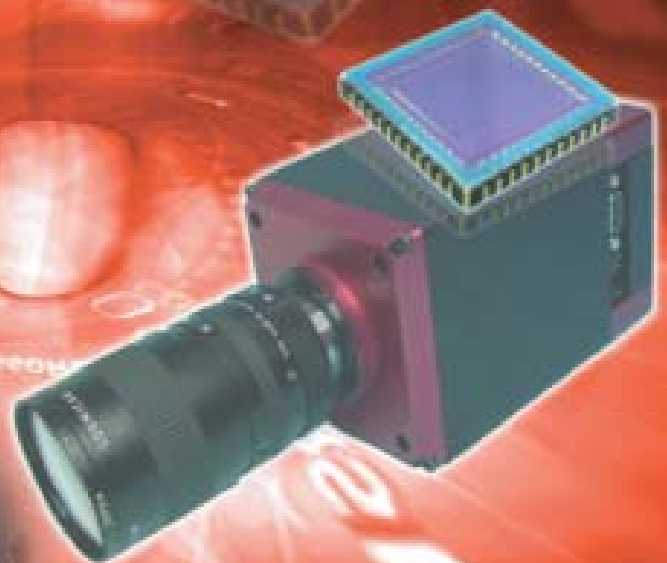
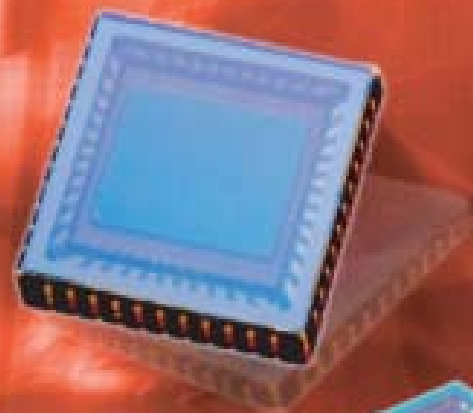
The InGaAs focal plane arrays are designed for near-infrared imaging and imaging spectroscopy applications in 900nm to 1700nm wavelength range. Owing to the small pixel leakage, uncooled operation is one of its remarkable features. The CLPT's FPA now is available in 320x256 array format and packaged inside a ceramic leadless chip carrier.

### » Features 《產品特性》

- 320x256 array format
- Light weight, solder-sealed LCC package
- Room temperature operation
- Typical pixel operability > 99%
- Quantum efficiency > 70% in 1000nm-1600nm
- 320x256陣列畫素
- 輕質LCC封裝
- 室溫操作
- 操作率可達99%以上
- 量子效率於1000-1600奈米波長範圍大於70%

### » Applications 《產品應用》

- Near-infrared imaging
- Imaging spectroscopy
- Covert surveillance
- Semiconductor inspection
- Medical science and biology
- Fiberoptic telecommunication
- Astronomy and scientific
- Industrial thermal imaging
- 近紅外影像
- 影像光譜
- 隱密監視
- 半導體檢測
- 生物醫學
- 光纖通訊
- 天文科學
- 工業熱像



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# Specification

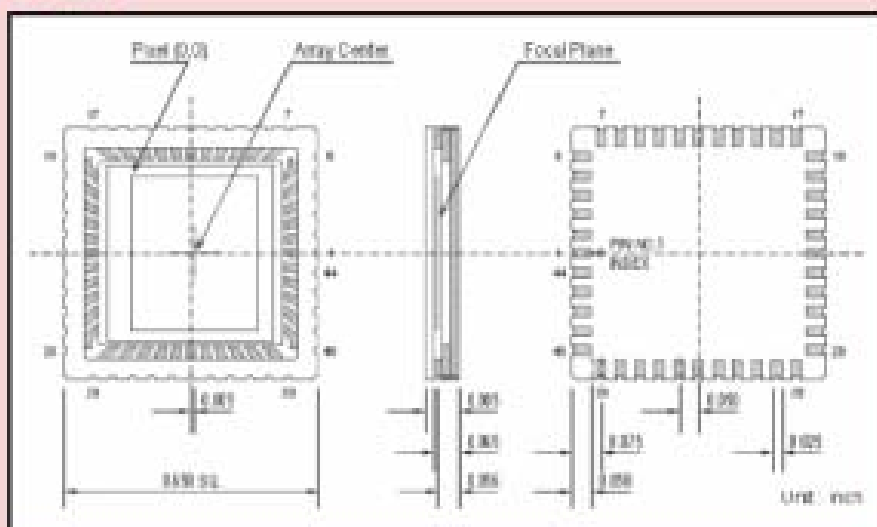
## Absolute Maximum Ratings

Parameter	Unit	Min	Max
Operation Temperature	°C	-20	85
Storage Temperature	°C	-40	85
Power Consumption	mW	—	175

## FPA Characteristics

Parameter	Typical	Conditions
Array size	320 x 256 pixels	—
Pixel pitch	30um	—
Spectral response	0.8um-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, $\lambda=1.55\mu\text{m}$ , $T_{int}=16\text{ms}$ , GAIN=13.3uV/e
Response nonuniformity	< 10%	under 50% saturation
Nonlinearity (max. deviation)	< 0.1%	over 10%-90% full well capacity
Max. pixel rate	10MHz	—
GAIN	High: 13.3 uV/e Low: 0.7 uV/e	25°C

## Package Outline



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