

InGaAs SWIR Detector (0.9 μm ~1.7 μm)

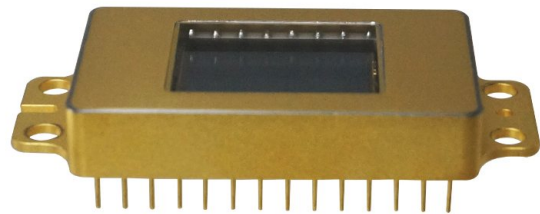
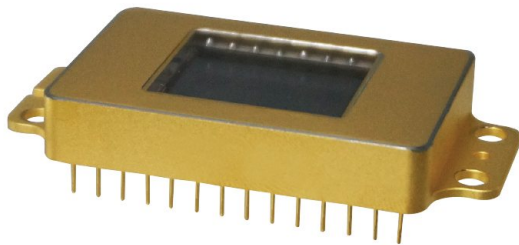
640 x 512 25 μm DS640-25M

Array Features

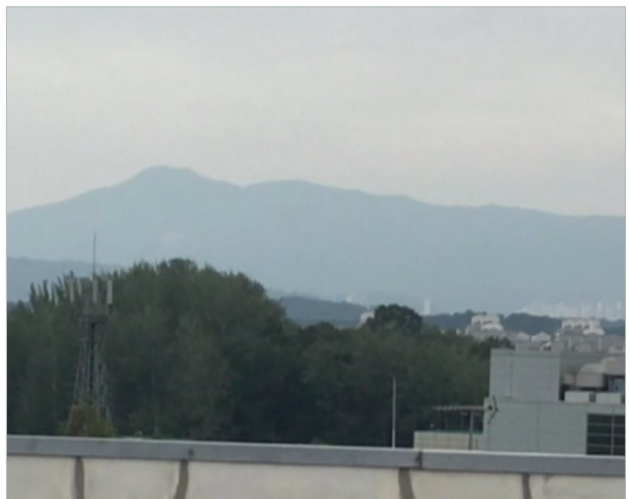
- 640 x 512 Array Format
- 25 μm Pixel Pitch
- 28-pin Metal Package
- Thermoelectric Cooler
- Typical Pixel Operability $\geq 99.5\%$

Applications

- Short wave infrared Imaging
- Imaging Spectroscopy
- Surveillance
- Semiconductor Inspection
- Medical Science and Biology
- Astronomy and Scientific



Images from the 2D IR detector



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Specifications

Array Features	
Sensor type	InGaAs
Array format/Pixel Pitch	640 x 512, 25 μ m
Spectral range	SWIR (0.9 μ m~1.7 μ m) Vis-SWIR (0.6 μ m~1.7 μ m) Optional
Detector Features	
Integration time	10 μ s to full frame
Maximum frame rate	30Hz / 60Hz / 100Hz (1ch / 2ch / 4ch)
D* (Detectivity)	$\geq 1.0 \times 10^{13}$ Jones (@1550nm)
Full well	Gain 1: 100ke- Gain 2: 1Me- Gain 3: 4Me- Gain 4: 5Me-
Output signal swing	2.1V (1.0V to 3.1V)
Input Bias	3.3V
Power consumption	Max. < 5W (@25 $^{\circ}$ C), Max. < 9W (@71 $^{\circ}$ C)
Windowing	Programmable
Temperature sensor output	Yes
Noise with ROIC	$\leq 100e^-$ [Gain 1]
Dark current	$\leq 0.2pA@0.1V$ detectorbias
Operability	$\geq 99.5\%$
Operating temperature	-35 $^{\circ}$ C to 71 $^{\circ}$ C
Storage temperature	-40 $^{\circ}$ C to 71 $^{\circ}$ C
Packaging Features	
Dimension (W x H x D)	50 x 25 x 6.8 mm
Windows	Sapphire
Number of pins	28
Cooler	Single stage TEC [9W Max]
Packaging characteristics	Hermetically sealed

DS640-25M Dimensions

