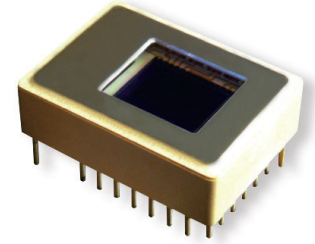


Cactus 320SW

Compact and High Sensitivity InGaAs FPA Module for Short Wave Infrared Imaging 320x256 InGaAs SWIR (30µm pitch)



Cactus 320SW is a compact and high-sensitivity FPA assembly designed for demanding low flux imaging applications in the wavelength range 0.9µm to 1.7µm (optionally 0.4µm to 1.7µm). Sofradir InGaAs technology exhibits outstanding performance in terms of dark current, uniformity and operability. Cactus 320SW is well adapted to a large range of applications such as night vision, surveillance, airborne gimbals and various industrial and scientific applications.

- InGaAs Sensor
- Low Power
- High Sensitivity
- Up to 346 Hz Operation
- 30 micron Pixel Technology

ELECTRO-OPTICAL SPECIFICATIONS @ 25° C

Quantum Efficiency (QE)	> 70% from 1µm to 1.6µm (*)
Noise with ROIC	< 150 e- (High Gain)
Dark Current	< 0.2 pA @ 0.2 V detector bias (typical 50 fA)
Operability	> 99.8% (typical 99.95%) (**)
Non-uniformity without Correction	< 7% (typical 5%)

PACKAGING

Dimension (W x H x D)	27.5mm x 20mm x 8.7mm
Windows	Sapphire
Number of Pins	26 (18 for the detector)
Cooler	Single stage TE Cooler (8.6 V - 5.7 W)
Packaging Characteristics	Hermetically sealed
Operation Temperature	From -20° C to 70° C
Storage Temperature	From -40° C to 70° C

(*) extended waveband option: QE > 25% @ 0.5µm, QE > 60% @ 0.8µm, QE > 75% from 1µm to 1.6µm.

(**) the fraction of pixels with responsivity deviation less than +/- 30% from the mean.

ROIC FEATURES

Integration Time	> 500 ns
Maximum Full Frame Rate @ 5 MHz	100 Hz / 200 Hz / 346 Hz (1, 2, or 4 outputs)
Maximum Frame Rate @ 5 MHz	15 KHz (windowing mode)
Maximum Pixel Rate	10 MHz
Full Well	170 10 ³ e- (High Gain) / 3.5 10 ⁶ e- (Low Gain)
Output Signal Swing	2.7 V
Input Bias	4.7 V to 5.5 V
Windowing	Programmable: ≥ 32x8 (1 output mode, 15.6 KFPS) ≥ 64x8 (2 output mode, 15.6 KFPS) ≥ 128x8 (4 output mode, 15.6 KFPS)
Temperature Sensor Output	Yes

ARRAY FEATURES

Sensor Type	InGaAs PIN - Photodiode
Format	320x256
Pixel Pitch	30µm x 30µm
Waveband	0.9µm to 1.7µm (or 0.4µm to 1.7µm optional)

Technical characteristics described in this data sheet are for information only and are not contractual. Because of ongoing product enhancements, specifications are subject to change without notice. Export of these products from the United States is controlled by the US Government. Prior authorization is required for re-export or transfer.



SOFRADIR EC, INC. 373 US Hwy 46W, Fairfield, NJ 07004 USA
Phone: 973-882-0211 Fax: 973-882-0997



© 2013 - All rights reserved. An ISO 9001 Certified Company.