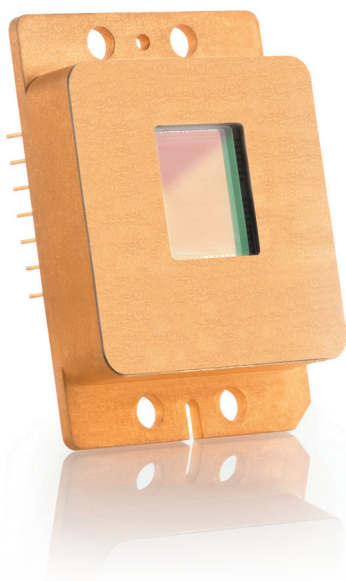


SNAKE SW

640 x 512 - 15 μm pitch - InGaAs

→ High performance VGA SWIR detector for low-light applications.



Snake SW is a very low noise and high speed InGaAs sensor with built-in Thermo-Electric Cooler (TEC).

It is designed for the most demanding SWIR applications such as surveillance, industrial and science applications.

Lynred InGaAs technology provides leading edge performance in terms of sensitivity, noise, dark current and operability.

ARRAY FEATURES

Sensor type	InGaAs PIN - Photodiode
Format	640 x 512
Pixel pitch	15 μm x 15 μm
Spectral response	0.9 μm - 1.7 μm

ROIC (READ-OUT INTEGRATED CIRCUIT)

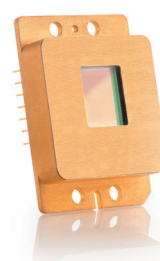
Integration type	Snapshot / Global Shutter
Readout modes	IWR, ITR, NDR
Exposure time	1 μs to full frame
Maximum full frame rate @ 9 MHz	100 fps / 180 fps / 300 fps (2, 4 or 8 outputs)
Maximum frame rate @ 9 MHz	30 KHz (windowing mode)
Maximum pixel rate	18 MHz per output
Charge handling capacity	43 10^3 e ⁻ (Gain 0) / 120 10^3 e ⁻ (Gain 1) / 1.44 10^6 e ⁻ (Gain 2)
Output signal swing	2.3 V
Input bias	1.8 V to 3.6 V
Windowing	Programmable ($\geq 8 \times 4$ [2 output mode, 30 KFPS]; $\geq 16 \times 4$ [4 output mode, 30 KFPS]; $\geq 32 \times 4$ [8 output mode, 30 KFPS])
Temperature sensor output	Yes

SNAKE SW

SNAKE SW

640 x 512 - 15 μm pitch - InGaAs

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SNAKE SW

TYPICAL PERFORMANCES

Quantum efficiency (QE)	> 70% from 1 μm to 1.6 μm
Noise with ROIC	< 30 e ⁻ (Gain 0)
Dark current	30 fA @ 0.2 V detector bias
Array operability	99.9% (*)
Non uniformity without correction	4%

PACKAGING

Dimension (W x H x D)	42 mm x 30 mm x 9 mm
Windows	Sapphire
Number of pins	28 Standard 1/10 inch pin pitch
Cooler	Single stage TE Cooler
Packaging characteristics	Hermetically sealed
Operating temperature	- 40° C to 71° C
Storage temperature	- 40° C to 71° C

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

APPLICATIONS



Technical characteristics described in this data sheet are for information only. They are not contractual and may change without prior notice.

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