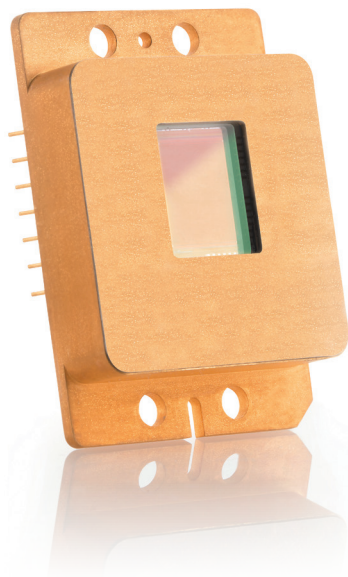


SNAKE SW

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.

SNAKE SW

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 |

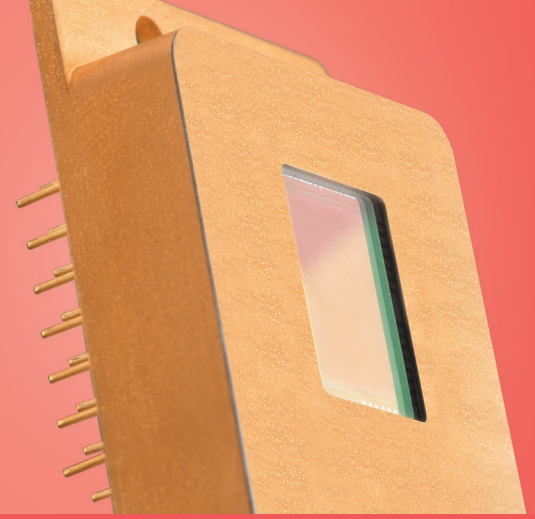


LYNRED USA

SNAKE SW

640 x 512 - 15 μm pitch - InGaAs

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



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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SNAKE SW