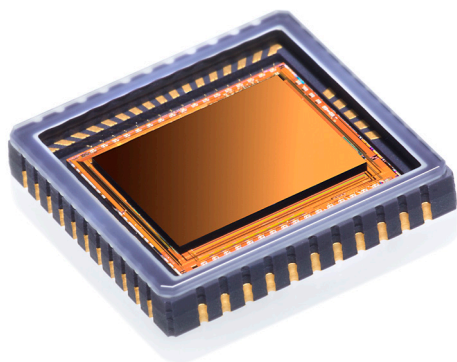


# SNAKE SWTECLESS

640 x 512 - 15  $\mu\text{m}$  pitch - InGaAs

→ Compact Short-Wave Infrared (SWIR) detector with high performance enabling volume industrial and surveillance applications.



Snake SW Tecless is the world's most compact infrared detector with VGA resolution, high speed and leading edge noise characteristics for best-in-class SWIR imaging.

Lynred detectors based on InGaAs technology offer high performance to machine vision, security and science applications where SWIR is a key enabling technology to see the invisible and solve new challenges.

## ARRAY FEATURES

Sensor type	InGaAs PIN - Photodiode
Format	640 x 512
Pixel pitch	15 $\mu\text{m}$ x 15 $\mu\text{m}$
Spectral response	0.9 $\mu\text{m}$ - 1.7 $\mu\text{m}$

## ROIC (READ-OUT INTEGRATED CIRCUIT)

Integration type	Snapshot / Global Shutter
Readout modes	IWR, ITR, NDR
Exposure time	1 $\mu\text{s}$ 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 <sup>-</sup> (Gain 0) / 120 $10^3$ e <sup>-</sup> (Gain 1) / 1.44 $10^6$ e <sup>-</sup> (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 SWTECLESS

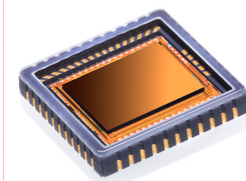
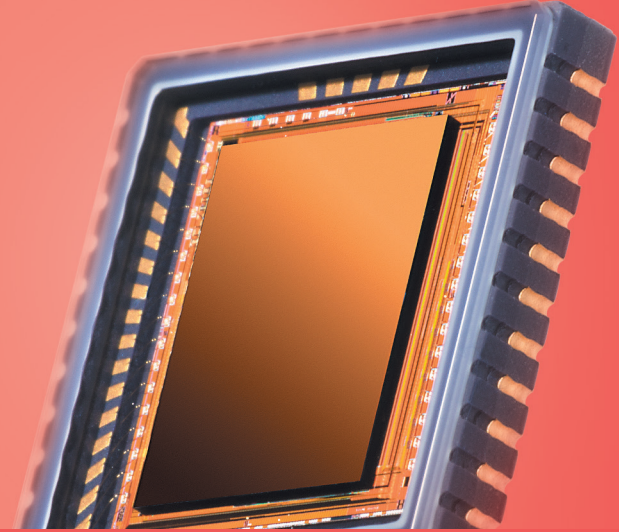


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## TYPICAL PERFORMANCES

Quantum efficiency (QE)	> 70% from 1 $\mu\text{m}$ to 1.6 $\mu\text{m}$
Noise with ROIC	< 30 e <sup>-</sup> (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)	16.5 mm x 16.5 mm x 2.8 mm
Windows	Borosilicate glass
Number of pins	44 / Standard CLCC with 1.27mm pitch
Packaging characteristics	Hermetically sealed
Operating temperature	- 20° C to 60° C
Storage temperature	- 20° C to 60° 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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