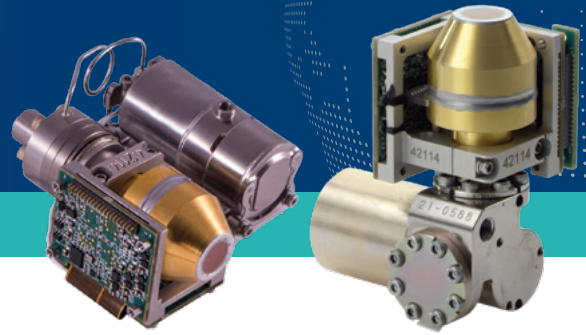




Kinglet

Low-SWaP High Performance MWIR
640X512, 15 μ m pitch, HOT (150K) Detector
Based on Digital "PelicanD" ROIC

Defense Applications



General Description

Kinglet is based on SCD's state-of-the-art XBn (InAsSb) technology which demonstrates high performance at 150K FPA operating temperature.

The product was developed in response to market demand for reduced SWaP (Size, Weight and Power) and for increased reliability.

In order to support large variety of applications, the Kinglet detector can be integrated with either rotary (hand held applications) or linear (gimbaled applications) cooler.

Applications

- Light payloads for mini UAVs
- Hand Held Thermal imagers
- Personal Thermal Weapon Sight
- Situation Awareness
- Remote Weapon Stations

Main Features

- High operating temperature (150K) XBn – InAsSb
- High image quality
- Low power < 3.5W
- Light weight < 300g
- Small size cooler
- High reliability



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Typical Performance

Parameter	Value		
Format	640x512, 15 μm pitch (windowing enabled)		
Detector Spectral Response	3.6-4.2 μm (1.0-4.2 μm for special requirements)		
Cold shield F#	F# in the range of F/2.5 – F/5.5		
Typical FPA Temperature	150K		
Pixel capacity	1Me- & 3 Me- (selectable)		
Operability	> 99.5%		
NETD	< 23mK (@ 50% well fill, 300K background)		
Residual Non-Uniformity	0.05% Std/DR@20-80% well fill capacity		
Response Uniformity	< 2.5% Std/DR		
Frame rate @ full window	up to 100Hz		
Proximity Electronics Power	< 0.5W		
	Kinglet	Kinglet LP	Kinglet SLC
Cooler	K562S (rotary)	K580 (rotary)	SX020 (linear)
Cooling Power Consumption @23°C	2.8W	2W	3.5W
IDCA length (optical axis)	80mm	82mm	78mm
IDCA weight	280g	280g	300g
Cool down time @23°C	4min	4min	5min
Cooler MTBF	>10,000 hours	>10,000 hours	>20,000 hours

Specifications are subject to changes without further notice