

About IRnova AB

IRnova AB is an independent Swedish company engaged in the development, manufacturing and marketing of high-end cooled infrared detectors and related technology.

IRnova AB is leading novel 15 μ m QWIP and T2SL-based infrared sensors, creating a clear competitive advantage for its customers and OEM partners.

Years of experience in volume production of cooled IR detectors with excellent manufacturing track records have positioned IRnova as a long term and reliable merchant supplier of unique and highly competitive infrared technology.

IRnova's leading researchers and state of the art production assets serves challenging military and industrial requirements as well as new emerging infrared applications.

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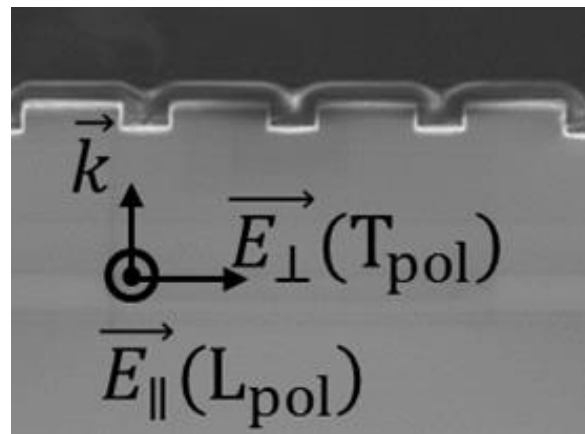
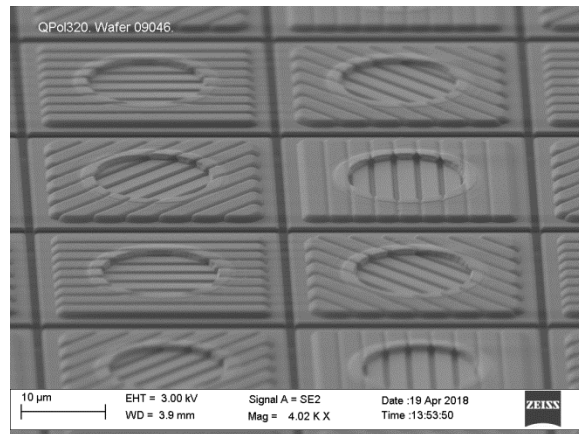
Cooled Infrared Polarimetric Imaging By IRnova



IRnova320ER-POL IDCA

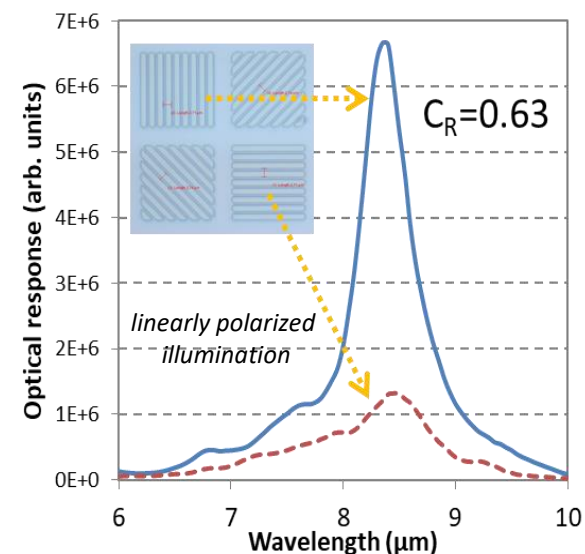
IRnova320ER-POL IDCA is a QVGA detector that combines excellent thermal imaging performance and inherent pixel-based polarization sensitivity.

IRnova320ER-POL IDCA is the first commercially available cooled LWIR infrared sensor with built-in 2x2 pixel block structure. Each pixel is sensitive to a distinct polarization angle. Pixel polarization relies on QWIP lamellar gratings oriented at 0°, 45°, 90°, and -45° allowing genuine polarimetric response without added polarizing filters.



IRnova320ER-POL IDCA extreme thermal sensitivity and state-of-the-art polarimetric contrast (CR 60%) will enable novel system designs and breakthrough in already know applications such as remote sensing, automatic target recognition, camouflage denial, aerial surveillance, IED detection, facial recognition and more.

$$C_R = \frac{R_{\perp} - R_{\parallel}}{R_{\perp} + R_{\parallel}}$$



FEATURES

- LWIR infrared (QWIP based , inherently uniform)
- 320 x 256 resolution @ 30 μm pixel pitch
- Pixelated Polarimetric response
- Cooler Control, A/D Converter and Pre-Amplifier

TYPICAL IMAGING PARAMETERS		
Spectral response	7,5 – 9.0 μm	
F-number	F/2	Other F# on request
Temporal NETD	~ 25 mK	
Spatial NETD	~ 10mK	
Operability	> 99.9 %	
Frame rate	60 Hz	Selectable frame rate (15, 30, 50 and 60 Hz)

TYPICAL POLARIMETRIC PARAMETERS		
Polarization contrast	~ 60%	
NEDOLP	< 0.1 %	Net Equivalent Degree of Linear Polarization

TYPICAL IDDCA PARAMETERS		
Cooler type	Integrated rotary Stirling	
Power consumption (incl. Proxy)	~ 7 W	During steady state operation
Cool down time	~ 6 min	
Supply voltage	12 V	
Electrical Interfaces	LVDS and I ² C	Uncompressed raw digital video stream and ctrl/cmd interface (with optional proxy board)
Weight	~ 550 g	

