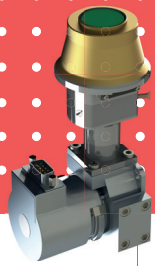




LYNRED®

See Beyond Horizons

CRYO XS PT™



CRYO XS R™

INFRARED DETECTORS

SPACE SIROCCO™

640 x 512 - 15µm - eSWIR

SPACE SIROCCO™ is a **VGA staring array detector** well-suited for integration in various space-based Earth observation applications like **atmosphere chemistry, greenhouse gas monitoring or hyperspectral imaging**.

Based on LYNRED space proven MCT technology, SPACE SIROCCO™ detector offers the **highest level of performances** (high operability, high frame rate, low readout noise...) as well as a cost effective approach.

STARING ARRAY INFRARED DETECTOR FOR NEW SPACE HYPERSPECTRAL AND SPECTROSCOPY IMAGING APPLICATIONS



HIGH SENSITIVITY EXTENDED UP TO 2.5µm



EMBEDDED SPACE PROVEN TECHNOLOGIES

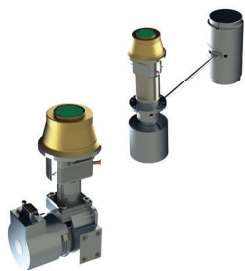


WELL ADAPTED FOR HYPERSPECTRAL AND SPECTROSCOPY IMAGING



ORDERING REFERENCE: SPACE SIROCCO™

●● STARING ARRAY INFRARED DETECTOR FOR NEW SPACE HYPERSPECTRAL AND SPECTROSCOPY IMAGING APPLICATIONS ●●



MULTI-PURPOSE



MULTI-APPLICATION



SPACE PROVEN ARCHITECTURE



HIGH PERFORMANCE



LARGE eSWIR SPECTRAL RANGE

ARRAY FEATURES	
Spectral range	■ 0.9 – 2.5 μ m
Format & Pixel pitch	■ 640 x 512, 15 μ m pitch
FPA operating temperature	■ [150K,200K]

ROIC (READ-OUT INTEGRATED CIRCUIT)	
ROIC architecture	<ul style="list-style-type: none"> ■ CTIA input stage ■ Snapshot integration type ■ Readout: IWR/ITR ■ Analog outputs: 4 outputs
ROIC main functionalities	<ul style="list-style-type: none"> ■ Windowing (minimum window size is 160 x 2) ■ Anti-blooming ■ Power management
Operating characteristics	<ul style="list-style-type: none"> ■ Maximum full frame rate (IWR) : 200Hz ■ Frame rate depending on windowing (examples) : 400Hz (640x256), 800Hz (640x128) ■ Integration time: adjustable in the frame
Charge Handling Capacity	■ 1.0 Me-

TYPICAL PERFORMANCES (NOMINAL CONFIGURATION)	
Quantum Efficiency (QE)	■ 80%
PRNU	■ < 2%
Dark current	<ul style="list-style-type: none"> ■ 2 10-3 fA/μm² @ 150K ■ 5 10-1 fA/μm² @ 190K
MTF @Nyquist	■ 0.5
Non linearity	■ < 1% p-p from 5 to 95% of FWC
ReadOut Noise	■ 150 e-
Operability	■ > 99.5%
Power Dissipation	■ 150mW @200Hz (full frame)

PACKAGING	PASSIVE™ (NO CRYOCOOLER)	CRYO-XS R™	CRYO-XS PT™
Dimensions	<ul style="list-style-type: none"> ■ IRFPA: 12 x 11.3mm² ■ Baseplate adjustments on demand 	■ 85 x 64 x 152 mm ³	<ul style="list-style-type: none"> ■ Dewar : 60 x 60 x 220 mm³ ■ Cooler : 60 x 60 x 122 mm³
FPA operating temperature	■ [150 - 200 K]	■ [-40°C,71°C]	■ [-40°C,71°C]
Cooler	■ N/A	■ Rotary cryocooler Thales Cryo RM3 or Ricor K508	■ Pulse Tube cryocooler Thales Cryo LPT9511
Product power consumption	■ 150mW @200Hz (full frame)	■ Steady State : < 4.5Wdc @ 22°C	■ Steady State : < 15Wdc @ 22°C
Power supply range	■ 2.75V	■ 24V	■ 24V

LYNRED HEADQUARTERS DEVELOPMENT & PRODUCTION CENTER

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