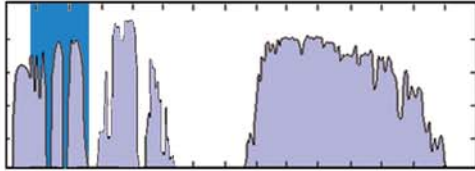
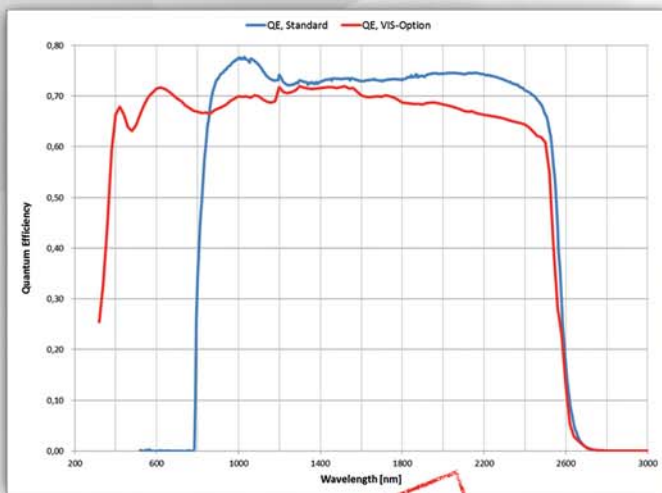


MCT 1024 x 256 SWIR IDCA

EXTENDED SHORT WAVE IR-MODULE FOR HYPERSPECTRAL IMAGING DEVICES



Electronics not shown



The MCT 1024 x 256 SWIR IDCA is a high performance module with a spectral band of 0.9 μ m - 2.5 μ m that can optionally be extended to 0.4 μ m - 2.5 μ m.

The detector is optimized to provide high spatial resolution and sensitivity, e.g. for hyperspectral imaging applications.

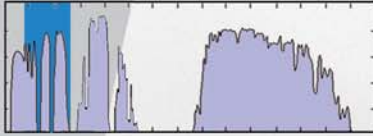
The module provides data rates up to 250Hz full frame and a digital data interface for easy system interfacing.

An Integrated Detector Cooler Assembly with Pulse-Tube coldfinger driven by a flexure bearing compressor provides unsurpassed lifetime for remote sensing in 24/7 applications.

**VIS OPTION
AVAILABLE**

MCT 1024 x 256 SWIR IDCA

EXTENDED SHORT WAVE IR-MODULE FOR HYPERSPECTRAL IMAGING DEVICES



IR Sensor

Material	HgCdTe - Cadmium Mercury Telluride
Format	1024 x 256
Pixel pitch	24µm x 32µm
Detector spectral response	0.9µm - 2.5µm (optional 0.4µm - 2.5µm)

ROIC

Technology	Si - CMOS
Input	Capacitance Transimpedance Amplifier (CTIA)
Operating mode	Snapshot
Read out modes	selectable ITR / IWR
Windowing	programmable (any window in steps of 8 columns and 1 row); deselection of individual rows possible
Charge handling capacity	> 1.2 Me ⁻ (Low Gain) > 0.3 Me ⁻ (High Gain) individually selectable for each row

Command, Control & Power Electronics

Type	CCE8K
Output Video	CL LVDS 16bit (16bit ADC)
Input supply / control / synchronization	28VDC / RS-232 / Internal, external frame sync
Power consumption	5W
Max. data rate	80MHz
Max. full frame rate	250Hz

Dewar / Cooler

Cold shield	F/1.8, other on request
Cooler	SF100 Pulse Tube Cooler
Cooler electronics	external digital
FPA operating temperature	150K
Cool down time*	10min
Cooler power consumption*	< 40W
MTTF cooler**	> 50,000h
Total weight IDCA	< 3.5kg

* at ambient room temperature

** will depend on usage profile

Performance

Mean SNR (half well)	> 650 (Low Gain) > 350 (High Gain)
Array operability	> 97%

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