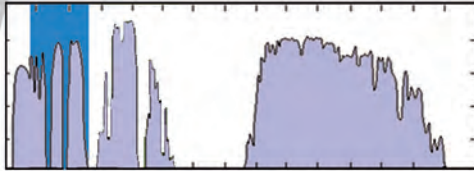
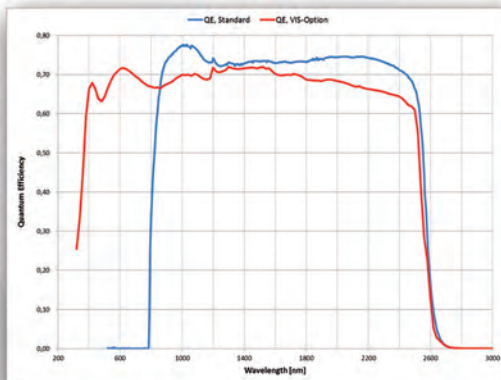


MCT 640 x 512 10 μ m PITCH SWIR IDCA

EXTENDED SWIR-MODULES



- Extended short wave IR Band (0.9 μ m – 2.5 μ m)
- Superimposing thermal and reflective radiation
- Ultra-compact configuration
- Customized filter solutions available
- VIS option available (0.4 μ m – 2.5 μ m)



Illumination with bulb (~1 μ m)



No illumination thermal image



Laser illuminator 1.57 μ m



Laser illuminator 2.2 μ m



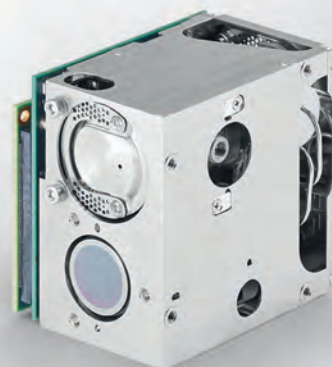
Ultra-compact extended short wave IR-Module

The MCT 640 x 512 SWIR IDCA is an ultra-compact module with a spectral response of 0.9 μ m – 2.5 μ m that can optionally be extended to 0.4 μ m – 2.5 μ m. Depending on the parameter setup full frame rates up to 100Hz can be achieved.

The ultra-compact Integrated Detector Cooler Assembly with an integrated command and control electronics delivers 14bit digital video data and provides a comprehensive system control interface.

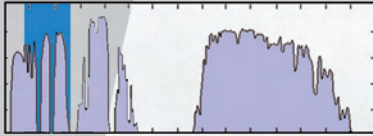
The modules are well suited for imaging applications like vision enhancement under low light condition providing specific features like visualization of typical laser illuminators.

Used in Hyperspectral Imagers the module provides extended SWIR sensing capability for various applications like e.g. remote sensing, process control, material analysis and sorting.



MCT 640 x 512 10µm PITCH SWIR IDCA

EXTENDED SWIR-MODULES



IR Sensor

Material	HgCdTe - Mercury Cadmium Telluride
Format	640 x 512
Pixel pitch	10µm x 10µm
Detector spectral response	0.9µm - 2.5µm (optional 0.4µm - 2.5µm)

ROIC

Technology	Si-CMOS
Input	Capacitance Transimpedance Amplifier (CTIA)
Operating modes	Snapshot integration: Integrate then read Integrate while read Rolling Shutter (with correlated double sampling (CDS) option)
Windowing	programmable (any window in steps of 4 columns and 1 row)
Charge handling capacity	≥ 1.0Me ⁻ (Low Gain) ≥ 0.1Me ⁻ (High Gain)

Command & Control Electronics

Output video	CL LVDS 16bit (14bit ADC)
Supply voltage	14VDC
Power consumption	< 4W
Max. data rate	40MHz
Max. full frame rate	100Hz@10MHz

Dewar / Cooler

Cooler	MCC020
Driving Cooler Electronics (DCE)	integrated in CCE
FPA operating temperature	~ 175K
Cold shield	F/1.6
Total weight IDCA	~ 0.4kg



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