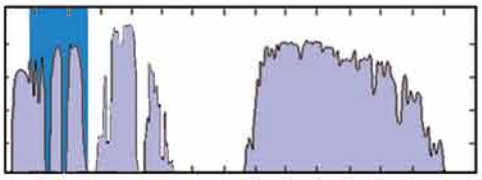
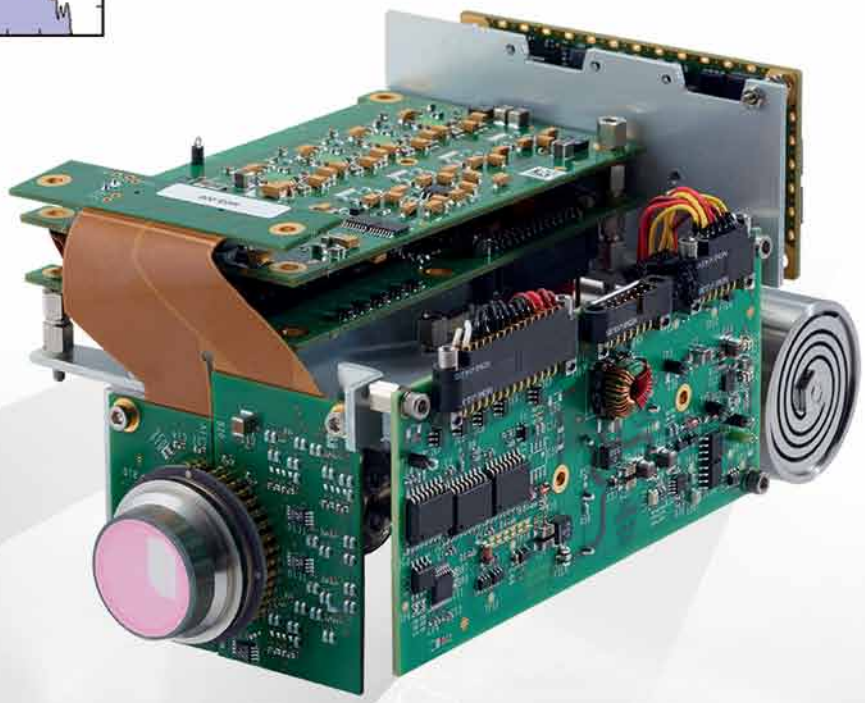
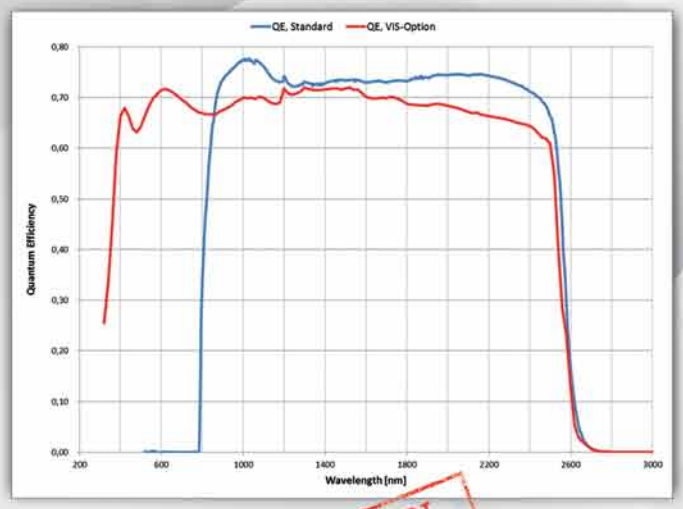
MCT 384 x 288 SWIR IDCA

EXTENDED SHORT WAVE IR-MODULE FOR HYPERSPECTRAL IMAGING DEVICES







VIS OPTION AVAILABLE

The MCT 384 x 288 SWIR IDCA is a compact module with a spectral band of 0.9µm - 2.5µm that can optionally be extended to 0.4µm - 2.5µm.

Using state of the art detector and cooling technology the device provides high sensitivity and a long life time for 24/7 industrial applications. The module provides date rates up to 450Hz full frame and a digital data interface for easy system interfacing.

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.

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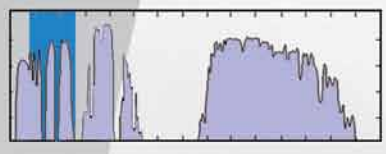

IR Sensor

Material	HgCdTe - Cadmium Mercury Telluride
Format	384 x 288
Pixel pitch	24µm x 24µm
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 Me^- (Low Gain) > 0.34 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	15VDC / RS-232 / Internal, external frame sync
Power consumption	4W
Max. data rate	80MHz
Max. full frame rate	450Hz

Dewar / Cooler

Cold shield	without cold shield, other optical interfaces on request
Cooler	Single Piston Linear Cooler MCC030, other coolers on request
Cooler electronics	external digital
FPA operating temperature	150K
Cool down time*	8min
Cooler power consumption*	< 10W
MTTF cooler**	> 25,000h
Total weight IDCA	< 1.0kg

* at ambient room temperature
** will depend on usage profile

Performance

Mean SNR (half well)	> 650 (Low Gain) > 350 (High Gain)
Array operability	> 99.5%

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