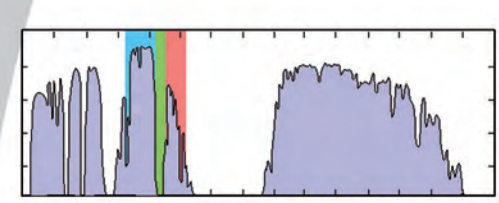
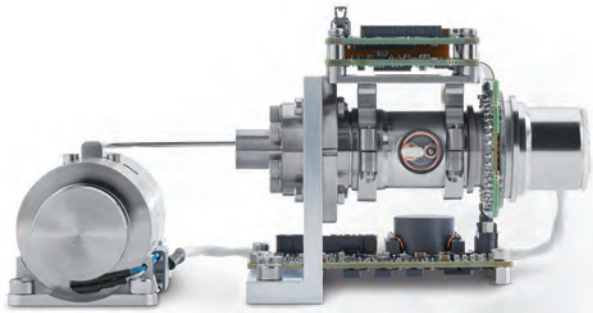
HiPIR-320MM – DUAL-COLOR MCT 320 x 256 30µm PITCH IDCA

DUAL-COLOR MWIR / MWIR-MODULES



- Two simultaneous colors in the MWIR band
- Spatial and temporal coincident registration
- Customized filter solutions available
- Compact configuration



MWIR-blue MWIR-red

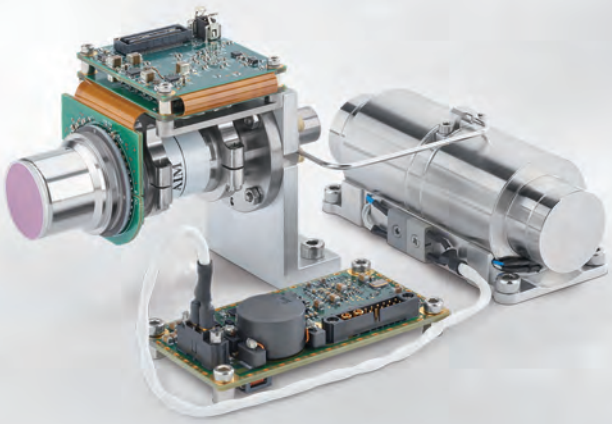
Difference Colorized

Dual-Color MWIR / MWIR imaging with spatial and temporal coincident registration

The HiPIR-320MM offers spatial and temporal coincident registration of two colors in the MWIR spectral band (SWIR / MWIR option on request). Depending on the parameter setup full frame rates ≥200Hz can be achieved.

The 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 applications like missile approach warning systems or wherever following image processing requires coincident registration.



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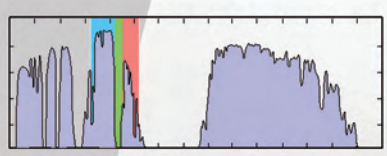


IR Sensor

Material	HgCdTe - Mercury Cadmium Telluride (MBE grown on GaAs)
Format	320 x 256 x 2 Colors
Pixel pitch	30µm x 30µm
Pixel color layout	Spatial coincident
Detector spectral response Color 1	3.4µm - 4.x µm (3.4µm cut-on by entrance window)
Detector spectral response Color 2	4.y µm- 5µm (with coldfilter defining spectral characteristics x-y)

ROIC

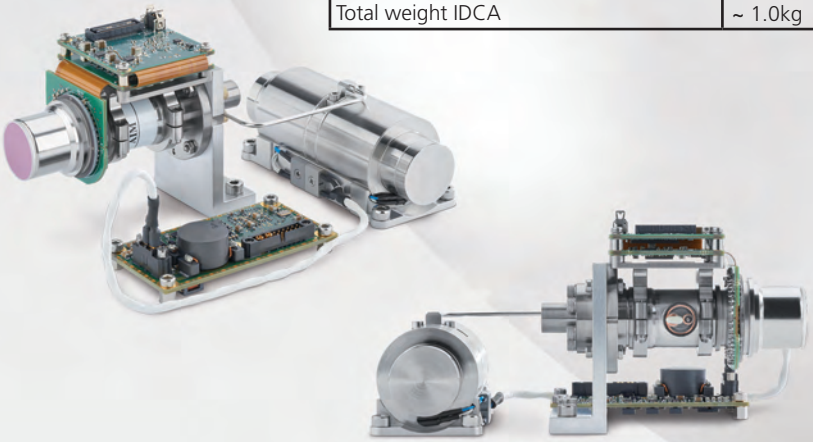
Technology	Si-CMOS
Input	Direct charge injection
Operating modes	Snapshot integration: Dual Color (temporal coincident) Single Color
Readout mode	Integrate than read
Windowing	programmable (any window in steps of 4 columns and 1 row)
Charge handling capacity	Color 1: ~ 1.5Mio e^- (CHC1); ~ 7.5Mio e^- (CHC2) Color 2: ~ 5Mio e^- (CHC1); ~ 18Mio e^- (CHC2)

Command & Control Electronics

Type	CCE8K-low-power
Output video	CL LVDS 16bit (14bit ADC)
Input supply/control/synchronization	5VDC / CL LVDS, UART LVTTL / Internal, external frame sync
Power consumption	2.5W
Max. data rate	80MHz
Max. full frame rate	200Hz@10MHz tint~2.6ms max.

Dewar / Cooler

Cooler options	SX035 (others on request)
Driving Cooler Electronics (DCE)	µDCE050 Digital Cooler Controller
FPA operating temperature	85K - 95K
Cold shield	F/2.0, (optional with customer specific coldfilter)
Total weight IDCA	~ 1.0kg



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