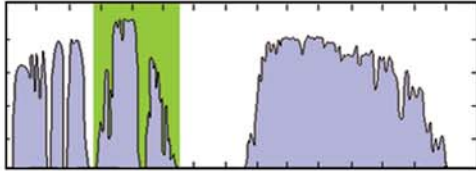


HiPIR-1280M - MCT MWIR 1280 x 1024 15 μ m PITCH IDCA

HIGHEST PERFORMANCE HD MWIR-MODULES



Highest Performance MWIR Imaging

- Long Range Surveillance
- Airborne Payloads
- High Performance Gunner and Commander Sights



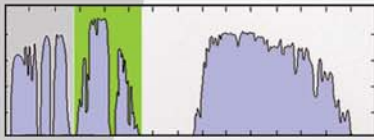
Focusing on ultimate high-definition IR-imaging AIM offers MCT 1280 x 1024 megapixel arrays with 15 μ m pitch for the MWIR and LWIR spectral band. The modules are well suited for airborne and ground based applications like rotorcraft pilotage sights or high-performance thermal gunner and commander sights.

The MWIR module allows slow F-number lens designs for long range surveillance with moderate integration times of typically 4 ms with F/4 at half-well fill condition. The thermal resolution given by the NETD is approx. 20mK.

Depending on whether minimum vibration output and maximum lifetime are key requirements or compactness and low power consumption, the detectors are available in optimized configurations with one of AIM's latest split linear cooler or with different integral rotary coolers. A dedicated electronics card set provides digital data output and easy system interfacing.

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IR Sensor

Material	HgCdTe - Cadmium Mercury Telluride
Format	1280 x 1024
Pixel pitch	15µm x 15µm
Detector spectral response	3.4 - 5µm

ROIC

Technology	Si - CMOS
Input	Direct charge injection
Operating mode	Snapshot
Read out modes	selectable ITR / IWR
Windowing	programmable (any window in steps of 8 columns and 1 row)
Charge handling capacity	~ 5.5 Me ⁻ (IWR) ~ 6.0 Me ⁻ (ITR)

Command & Control Electronics

Type	CCE8K-small
Output Video	CL LVDS 16bit (14bit ADC)
Input supply / control / synchronization	5VDC / CL LVDS, UART LVTTL / Internal, external frame sync
Power consumption	1.8W
Data rate	80MHz
Full frame rate	50Hz @ CL base configuration, others on request

Dewar / Cooler

Cooler	SX095	SX040	K548
Cooler type	Split Linear	Split Linear	Integral Rotary
Cooler electronics	external digital DCE100	external digital DCE100	internal analog
FPA operating temperature	95K	120K	95K
Cool down time*	4min	5min	5min
Cooler power consumption DC *	14W	10W	8W
MTTF cooler**	> 18,000h	> 20,000h	> 10,000h
Cold shield	F/4.0 standard, others on request		
Total weight IDCA	1.2kg	1.0kg	0.8kg

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

Performance

	SX095	SX040	K548
NETD (300K; half well)	25mK***	25mK***	25mK***
IETD	< 1.0 x NETD	< 1.0 x NETD	< 1.0 x NETD
Array operability	> 99.3%	> 99.0%	> 99.3%

*** (F/4; tint ~ 5ms, IWR)

AIM INFRAROT-MODULE GmbH

Theresienstraße 2
74072 Heilbronn/Germany
Tel.: +49 7131 6212 -0
Fax: +49 7131 6212 -939
info@aim-ir.com
www.aim-ir.com