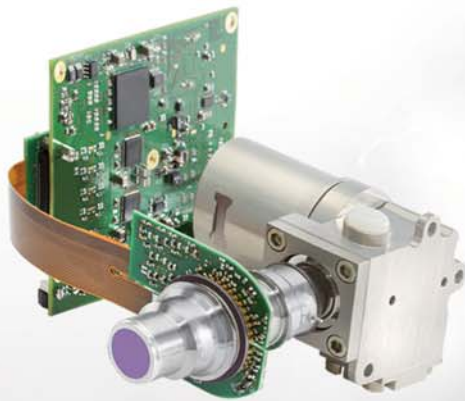
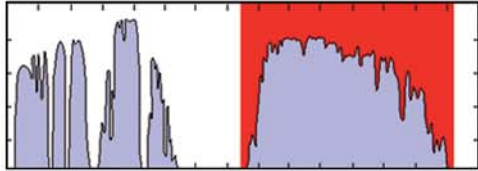


HiPIR-640L - MCT LWIR 640 x 512 15 μ m PITCH IDCA

HIGH PERFORMANCE LWIR-MODULES



Focusing on excellent E/O performance with minimum size, weight and power, AIM manufactures full TV format LWIR HiPIR-640L modules with 15 μ m pitch providing fast full frame rates up to 120Hz and short integration times of typically 200 μ s. For high performance LWIR imaging a high capacity ROIC version is available providing improved thermal resolution.



Depending on whether minimum vibration output and maximum lifetime or compactness and low power consumption are key requirements, the detectors are available in optimized configurations with AIM's new split linear coolers or with different integral rotary coolers.

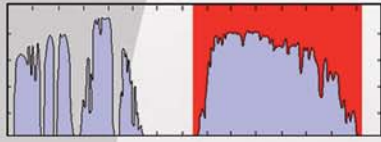
A dedicated electronics card set provides digital output optionally including sophisticated scene based non-uniformity correction and is designed to withstand even harsh environments.





HiPIR-640L - MCT LWIR 640 x 512 15µm PITCH IDCA

HIGH PERFORMANCE LWIR-MODULES



IR Sensor

Material	HgCdTe - Cadmium Mercury Telluride
Format	640 x 512
Pixel pitch	15µm x 15µm
Detector spectral response	7.6µm - 9µm

ROIC

	Standard	High Capacity
Technology	Si - CMOS	Si - CMOS
Input	Direct charge injection	Direct charge injection
Operating mode	Snapshot	Snapshot
Read out modes	selectable ITR / IWR	ITR, selectable progressive / interlaced
Windowing	programmable (any window in steps of 4 columns and 1 row)	programmable (any window in steps of 4 columns and 2 rows)
Charge handling capacity	~ 5 Me ⁻ (IWR) ~ 6 Me ⁻ (ITR)	~ 14 Me ⁻ (ITR, progressive) ~ 28 Me ⁻ (ITR, interlaced)

Command & Control Electronics

Type	CCE4K-low power
Output Video	CL LVDS 16bit (16bit ADC)
Input supply/control/synchronization	5VDC / CL LVDS, UART LVTTTL / Internal, external sync
Power consumption	1.5W
Max. data rate	48MHz
Max. full frame rate	120Hz

Dewar / Cooler

	SX095	K508 / RM3
Cooler type	Split Linear	Integral Rotary
Cooler electronics	external digital DCE100	internal analog
FPA operating temperature	70K	70K
Cool down time*	4min	6min
Cooler power consumption DC *	15W	6W
MTTF cooler**	> 15,000h	> 8,000h
Cold shield	F/2.05 standard, others on request	
Total weight IDCA	1.0kg	0.6kg

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

Performance

	Standard	High Capacity
NETD (300K; half well)	33mK***	23mK****
IETD	< 1.0 x NETD	
Array operability	> 99.3%	

*** (F/2.05,tint ~ 0.2ms, ITR)
**** (F/2.05,tint ~ 0.4ms, ITR progressive)



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