

MARS MW

320 x 256 - 30 μm pitch - MCT

→ The reference for MWIR
320 x 256 detectors.



Mars MW is in production at Sofradir for more than 10 years.

Reference for MWIR 320 x 256 detectors, this IDCA is battlefield-proven and in operational systems all over the world.

This product is also used for commercial and space applications.

This high-performance IDCA takes full advantage

ARRAY FEATURES

| | |
|----------------------------|---------------------------------------|
| Format | 320 x 256 |
| Pixel pitch | 30 μm x 30 μm |
| Detector spectral response | 3.7 μm – 4.8 μm |
| FPA Operating temperature | Up to 90 K |

ROIC (READ-OUT INTEGRATED CIRCUIT)

| | |
|--------------------------|--|
| Selection | Parallel and serial electrical interface |
| ROIC architecture | Snapshot operation, direct injection input circuit, Integrate Then Read mode |
| ROIC functionalities | Programmable integration time ($\geq 3 \mu\text{s}$), anti-blooming |
| Windowing modes | 320 x 256 / 320 x 240 / 256 x 256 or programmable |
| Charge handling capacity | 36 10^6 e^- (Gain 1); 14.8 10^6 e^- (Gain 0) |
| Electrical dynamic range | 2.75 V (Gain 1); 3 V (Gain 0) |
| Readout noise | 1000 e^- |
| Signal outputs | 1 or 4 |
| Pixel output rate | Up to 6.6 MHz per output |
| Frame rate | Up to 320 Hz full frame rate |

MARS MW

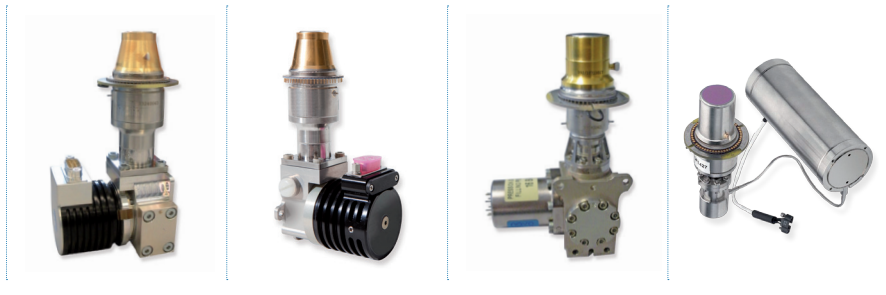
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TYPICAL^[*] PERFORMANCES



| NETD | 8.5 mK (f/2, 36 10^6 e ⁻ , 300 K, 50% well fill, 90 Hz) 13 mK (f/4, 12 10^6 e ⁻ , 300 K, 50% well fill, 80 Hz) | | | |
|----------------------------|---|---------------------|----------------------|--------------------|
| Array operability | 99.7% | | | |
| Non uniformity | 2.5% RMS (σ /mean, 300 K uncorrected performance) | | | |
| | RM3 or SRI401 | K508 | RM2 | LS5-7i/15 |
| FOV | f/2; f/4 | f/2; f/4 | f/4 | f/2.5 |
| Regulated input power (**) | 5.3 W _{DC} | 5.3 W _{DC} | 5.3 W _{DC} | 8 W _{AC} |
| Cooldown input power (**) | 13 W _{DC} | 9.5 W _{DC} | 12.6 W _{DC} | 23 W _{AC} |
| Power supply | 24 V | 24 V | 32 V | 8-12 V |
| Cooldown time | 4 min 40 s | 5 min 50 s | 6 min | 4 min |
| Cooler dimensions (mm) | Ø 46 × L 71 | Ø 46 × L 71 | Ø 30.5 × L 82 | Ø 44.5 × L 123 |
| Weight | 0.575 kg | 0.55 kg | 0.34 kg | 1.65 kg |
| Operating temperature | - 40° C to 71° C | - 40° C to 71° C | - 40° C to 71° C | - 40° C to 71° C |

[*] Optional extended waveband : 40% @ 0.5 μm , 75% @ 0.8 μm , >80% from 0.9 μm to 1.6 μm

[**] W_{DC} = at cooler C&CE DC input

OPTIONS

Proximity driving electronics (including ADC)

Technical training and support

Cooler driving electronics for LS5

APPLICATIONS



Exclusive Distributor - North America

Technical characteristics described in this data sheet are for information only.
They are not contractual and may change without prior notice.



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