

LEO MW is a compact detector specially designed for SWaP (optimised size, weight and power) MWIR applications.

In function of your application and your main requirements, the LEO MW product range is available in version up to 110 K.

Thanks to its digital output, this product simplifies your interfaces and speeds up the development of your systems.



# LEO MW PRODUCT RANGE

640 x 512 - 15  $\mu\text{m}$  - MCT

## THE BEST PERFORMANCE IN A COMPACT VGA PRODUCT



**OPTIMIZED FORM FACTOR**



**INTEGRATION FRIENDLINESS**



**RELIABILITY**

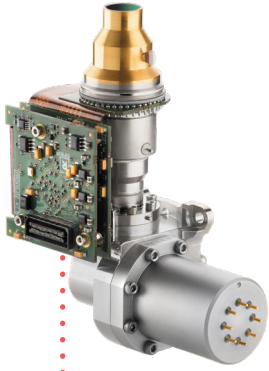
DEFENSE



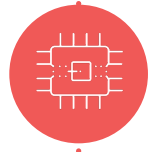
SURVEILLANCE



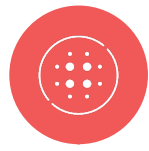
# LEO MW



COMPACT



SWAP



DIGITAL CONVERSION



RELIABILITY

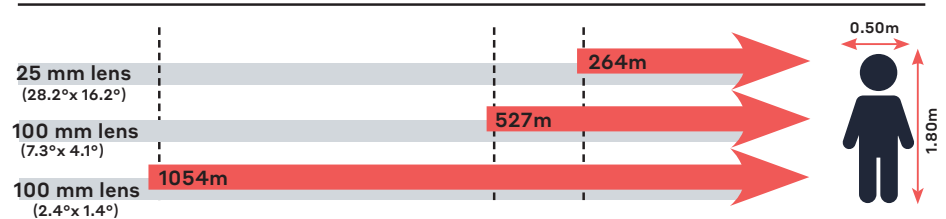
## THE BEST PERFORMANCE IN A COMPACT VGA PRODUCT

| ARRAY FEATURES                             |  |                           |
|--|--|---------------------------|
| Detector spectral response                 | ■ 3.7 $\mu\text{m}$ - 4.8 $\mu\text{m}$  |                           |
| FPA Operating temperature                  | ■ 90K to 100 K   |                           |
| ROIC (READ-OUT INTEGRATED CIRCUIT)         |  |                           |
| Selection                                  | ■ Serial electrical interface (driven by the proxy board)                                      |                           |
| ROIC architecture                          | ■ Snapshot operation, direct injection input circuit, selectable read mode (IWR or ITR)        |                           |
| ROIC functionalities                       | ■ Programmable integration time<br>■ Anti-blooming<br>■ Image invert/revert/inverse            |                           |
| Windowing modes                            | ■ 640 x 512 / 640 x 480 / 512 x 512 or programmable  |                           |
| Charge handling capacity                   | ■ 6.5 10 <sup>6</sup> e <sup>-</sup> (ITR mode) or 5 10 <sup>6</sup> e <sup>-</sup> (IWR mode) |                           |
| Signal outputs                             | ■ Digital, 14 bits, CAMERALINK®  |                           |
| Pixel output rate                          | ■ Up to 10 MHz per output  |                           |
| Frame rate                                 | ■ Up to 60 Hz full frame rate  |                           |
| INPUT / OUTPUT                             |  |                           |
| Board power supply                         | ■ 5V   |                           |
| TYPICAL(*) PERFORMANCES                    |  |                           |
| NETD                                       | ■ 20 mK (293 K, f/5.5, 50 % well fill, 60 Hz)  |                           |
| Array operability                          | ■ 99.8%  |                           |
| Non uniformity (DC level and responsivity) | ■ 2.5% RMS ( $\sigma$ /mean, 293 K uncorrected performance)                                    |                           |
|  | <b>RM2 (***)</b>   | <b>K563 (***)</b>         |
| FOV  | f/4; f/5.5   | f/4; f/5.5                |
| Regulated input power (**)                 | 5.3 WDC  | 5.3 WDC                   |
| Cooldown input power (**)                  | 12.4 WDC   | 11.8 WDC                  |
| Power supply                               | 12 V   | 12 V                      |
| Cooldown time                              | 4 min 10 s   | 4 min 10 s                |
| Cooler dimensions (mm)                     | $\varnothing$ 30.85 x L 82   | $\varnothing$ 37.8 x L 59 |
| IDCA height (optical axis, mm)             | 119.2  | 119.2                     |
| Weight                                     | < 0.355 kg   | 0.38 kg                   |
| Operating temperature                      | [- 40° C; 65° C]   | [- 40° C; 65° C]          |
| MTTF                                       | 30000h   | 8025h                     |

(\*) Optional extended waveband : 40% @ 0.5  $\mu\text{m}$ , 75% @ 0.8  $\mu\text{m}$ , >80% from 0.9  $\mu\text{m}$  to 1.6  $\mu\text{m}$   
 (\*\*) WDC = at cooler C&E DC input  
 (\*\*\*) Performances related to the 80K LEO MW

| OPTIONS                                  |  |
|--|--|
| Technical training and support           |  |
| Demokit for easy image processing in lab |  |

### Recognition distances for human measuring 1.80 m x 0.50 m



Range for Johnson's criteria, target deltaT = 2K, perfect atmospheric and optics transmissions, theoretical square pixel.



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