

# LEO-LP MW

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

→ The low power VGA  
15 $\mu\text{m}$  pitch MWIR detector  
with a digital interface.



LEO-LP is a "Low Power" LEO thanks to an improved HgCdTe material enabling operating temperature +30K above the standard LEO product.

LEO MW digital output detectors are a family specially designed for SWAP (optimized size, weight and power) MWIR (3 - 5  $\mu\text{m}$ ) applications and take full advantage of Sofradir's state of the art technologies.

Compared to standard LEO, the improved cooler performances will have the following direct benefits for your systems:

-20% on IDCA Power	Increased battery autonomy; Higher system compactness & lower system weight (with smaller battery size)
-20% on Cool Down Time	Lower time to operation; Decreased "blind" period after turn-ON
+30% on cooler MTTF	Enlarged periods between maintenance operations; Better answer for 24/7; Reduced Life Cycle Cost; Reduced cooler acoustic noise

## ARRAY FEATURES

Format	640 x 512
Pixel pitch	15 $\mu\text{m}$ x 15 $\mu\text{m}$
Detector spectral response	3.7 $\mu\text{m}$ - 4.8 $\mu\text{m}$
FPA Operating temperature	110 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, anti-blooming, image invert / revert / inverse
Windowing modes	640 x 512 / 640 x 480 / 512 x 512 or programmable
Charge handling capacity	6.5 $10^6$ e- (ITR mode), 5 $10^6$ e- (IWR mode)
Signal outputs	Digital, 14 bits, CAMERALINK®
Frame rate	Up to 60 Hz full frame rate

## INPUT / OUTPUT

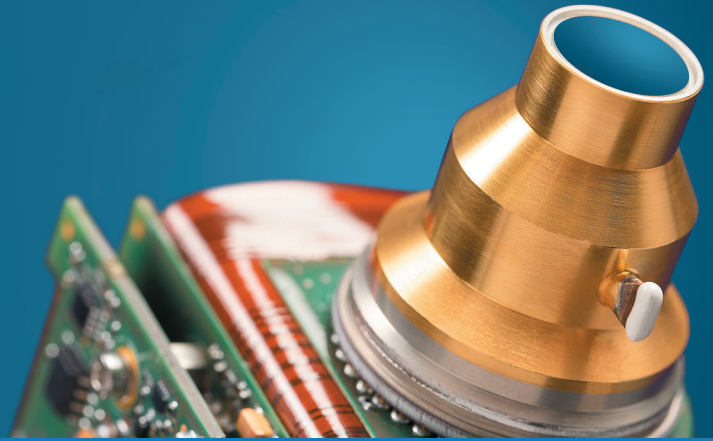
Board power supply	5 V
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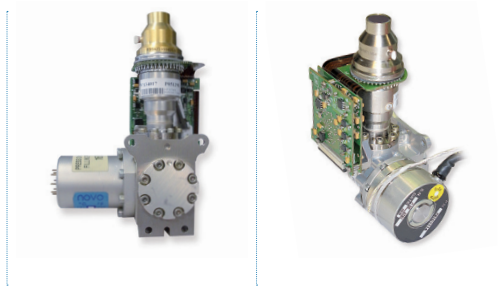
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## TYPICAL<sup>(\*)</sup> PERFORMANCES

NETD	20 mK (293 K, f/5.5, 50 % well fill, 60 Hz)	
Array operability	99.9%	
Non uniformity	< 2.5% RMS ( $\sigma$ /mean, 300 K uncorrected performance)	
	<b>RM2</b>	<b>K563</b>
FOV	f/4; f/5.5	f/4; f/5.5
Regulated input power (**)	4.4 W <sub>DC</sub>	4.4 W <sub>DC</sub>
Cooldown input power (**)	12.4 W <sub>DC</sub>	11.8 W <sub>DC</sub>
Power supply	12 V	12 V
Cooldown time	3 min 20 s	3 min 20 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 to 71° C	- 40° C to 71° C

(\*) Expected production mean value : 40% @ 0.5  $\mu\text{m}$ , 75% @ 0.8  $\mu\text{m}$ , >80% from 0.9  $\mu\text{m}$  to 1.6  $\mu\text{m}$

(\*\*) W<sub>DC</sub> = at cooler C&CE DC input

## OPTIONS

Technical training and support

## 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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