

# SCORPIO MW

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

→ The standard MWIR VGA  
15  $\mu\text{m}$  pitch IDCA.



SCORPIO MW is the standard MWIR VGA  
15  $\mu\text{m}$  pitch IDCA.

This IDCA has been developed to replace the  
MWIR QVGA format in military systems.

SCORPIO MW is also ruggedized for harsh  
environments.

This high-performance IDCA takes full advantage of  
Lynred's state of the art technologies.

## 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	Up to 90 K

## ROIC (READ-OUT INTEGRATED CIRCUIT)

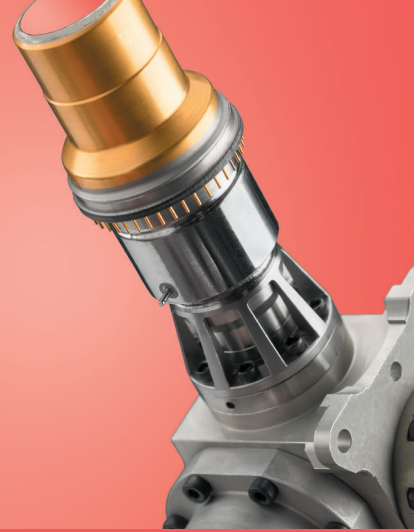
Selection	Serial electrical interface
ROIC architecture	Snapshot operation, direct injection input circuit, selectable read mode (IWR or ITR)
ROIC functionalities	Programmable integration time, anti-blooming
Windowing modes	640 x 512 / 640 x 480 / 512 x 512 or programmable
Charge handling capacity	6.5 $10^6$ e- (for 100% well fill and ITR mode) or 5 $10^6$ e- (for 100% well fill and IWR mode)
Electrical dynamic range	1.5 V
Readout noise	< 420 e-
Signal outputs	4
Pixel output rate	Up to 10 MHz per output
Frame rate	Up to 120 Hz full frame rate

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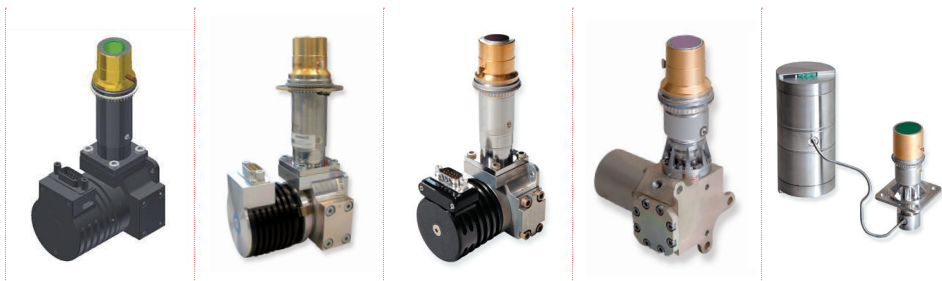
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## TYPICAL(\*) PERFORMANCES



NETD	18 mK (293 K, 50 % well fill, 100 Hz)				
Array operability	99.8%				
Non uniformity	2.5% RMS ( $\sigma$ /mean, 293 K uncorrected performance)				
	SRI401	RM3	K508	RM2	LSF9597
FOV	f/2; f/4	f/2; f/4	f/2; f/4	f/2; f/4	f/2
Regulated input power (**)	< 4.9 W <sub>DC</sub>	< 4.3 W <sub>DC</sub>	< 5 W <sub>DC</sub>	< 3 W <sub>AC</sub>	< 4.2 W <sub>AC</sub>
Cooldown input power (**)	< 11.9 W <sub>DC</sub>	< 12.5 W <sub>DC</sub>	< 13.5 W <sub>DC</sub>	< 10 W <sub>AC</sub>	< 7 W <sub>AC</sub>
Power supply	24 V	24 V	24 V	32 V	8-12 V
Cooldown time	5 min	4 min 50 s	5 min 30 s	5 min	3 min
Cooler dimensions (mm)	Ø 46 □ L 71	Ø 46 □ L 71	Ø 46 □ L 71	Ø 30.5 □ L 82	Ø 46 □ L 71
Weight	< 0.57 kg	< 0.57 kg	< 0.65 kg	< 0.45 kg	< 2.6 kg
Operating temperature	- 40° C to 71° C	- 40° C to 71° C	- 40° C to 71° C	- 40° C to 71° C	- 40° C to 71° C

(\*) Typical: Expected production mean value

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

## OPTIONS

Proximity driving electronics (including ADC)

Technical training and support

Cooler driving electronics for LSF

## APPLICATIONS



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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