

# IBEX 4M array

2k x 2k, 15 micron pitch array

The IBEX 4M array from Leonardo is a 2k x 2k, 15 micron pitch array designed for use with designed to accommodate Leonardo's avalanche Photo-diode MCT structure. The design incorporates a number of features including flexible scanning and reference pixels as well as glow suppression. In addition, it has design features for enhanced radiation hardness. For extra flexibility, there is an option for 4, 8 or 16 output buffers.

## Key Features

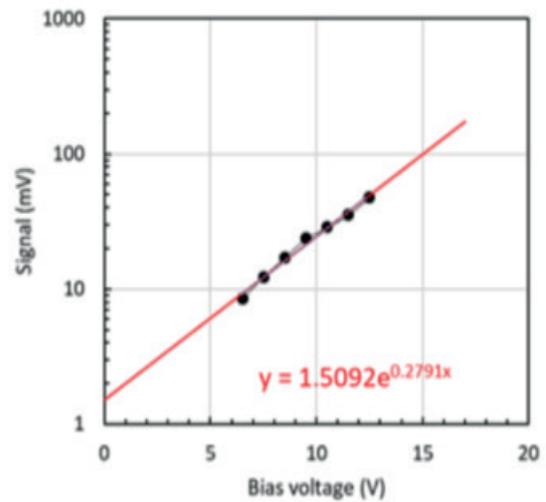
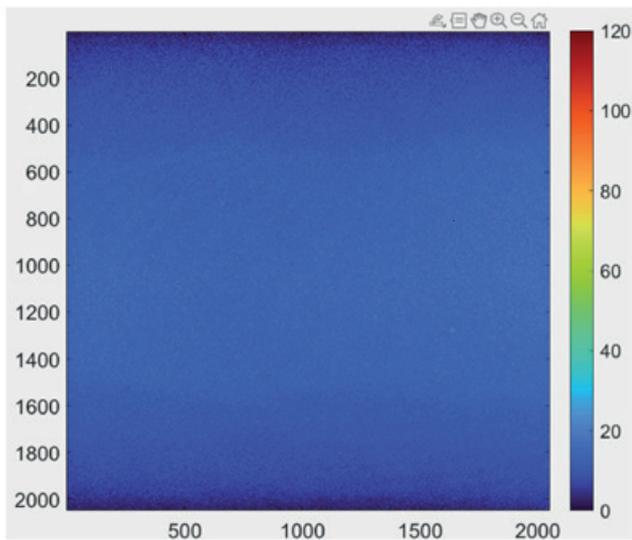
- 2048x2048 Format Array
- 4 Top + 4 Bottom Reference Rows
- 15um Pixel Pitch
- Low Glow Design
- Multiple windows. Both readout windows and reset windows are configurable
- 16, 8 and 4 analogue Video Outputs Selectable
- Output buffer (or output source follower option)
- Non-Destructive, Read-Rest-Read (RRR), interleaved, pixel by pixel and line by line reset
- Low Intrinsic noise
- Low Integration Capacitance
- Low Voltage Operation (3.3V)

# Applications

Optimised for low background space astronomy.

## Performance Summary

Parameter	Value	Comment / Condition
Active array size	2048x2048	
Power dissipation	<50mW	Normal operating conditions @250kHz, 3.8V
Linearity	<1% (TBC)	Accross minimum 80% of dynamic range
Noise	<12e (TBC)	ROIC noise CDT TBC
Transfer gain	0.80	Default Mode
Dynamic Range at output	1.45V (Max)	Please see analogue output section
CHC	>100Ke	
Pixel clock	270kHz	
Frame Rate	>1Hz	16 outputs @270kHz
Operational Temperature	80K	The ROIC is functional at room temperature, however normal operation is at cyogenic temperature



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