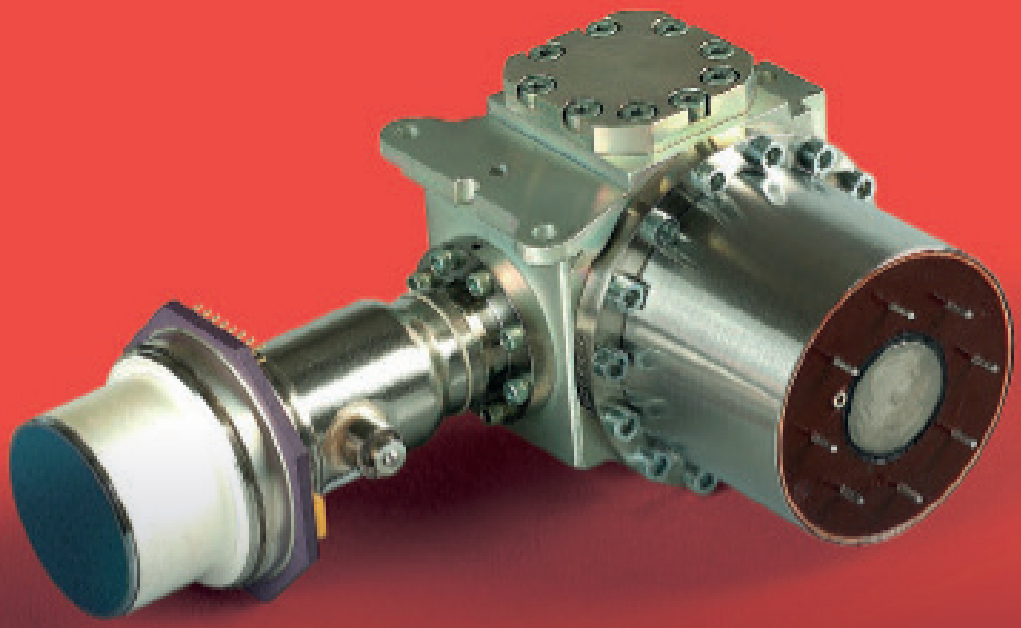
LEONARDO ELECTRONICS



HOT Hawk

High operating temperature (HOT) Hawk Medium Wave Infrared Detector

The company designs, develops and manufactures Infrared (IR) detectors at its dedicated facility in Southampton, UK. With a reputation for providing customers with the best in high performance and cost effective technology for IR camera systems, we offer a unique level of expertise.

The HOT Hawk Medium Wave Infrared (MWIR) detector is a compact and lightweight 640 x 512 Mercury Cadmium Telluride (MCT) Integrated Detector Cooler Assembly (IDCA).

The Hawk MWIR detector is designed for high performance, low cost imaging in the 3 - 5µm waveband. The company's MWIR MCT, grown by the MOVPE process, provides excellent imagery up to 175K and higher operating temperatures, for applications requiring lower input power and faster time to operation. This exceptional performance is achieved with a minimal increase in defective pixels.

Main features

- → Snapshot or rolling readout operation
- → Simple to use
- → Medium wave 3 - 5µm
- → Small element pitch enables miniaturisation of the Dewar assembly and optics
- → High electro-optic performance with low crosstalk, automatic anti-blooming at the pixel level and excellent sensitivity
- → Windowing gives enhanced frame rates over selected areas of the array
- → Higher operating temperature than InSb
  - → Longer cooler life
  - → Less in-service support
  - → Lower through-life cost

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Key benefits

- → Low cost
- → Lightweight
- → Compact
- → High resolution

Technical specifications

Format

Array	640 x 512 pixels
Pixel pitch	16um
Active area	10.24 x 8.19mm

Typical performance

NETD (Median)	17mK
Pixel operability	>99.8% at 80K >90% at 150K

Interface parameters

Modes	Snapshot or rolling reset
Configuration control	Single serial interface
Output voltage range	2.5V
Charge capacity	7 x 10^6 electrons
Number of outputs	4
Pixel rate	Up to 10MHz per output
Intrinsic MUX noise	50uV rms
Array operating temperature	80 to 180K
Nominal operating voltage	6V
Minimum pins for operation	16
Number of input clocks	1
Window material	Germanium
Window thickness	1.73mm
Cold filter material	Silicon
Cold filter thickness	0.4mm

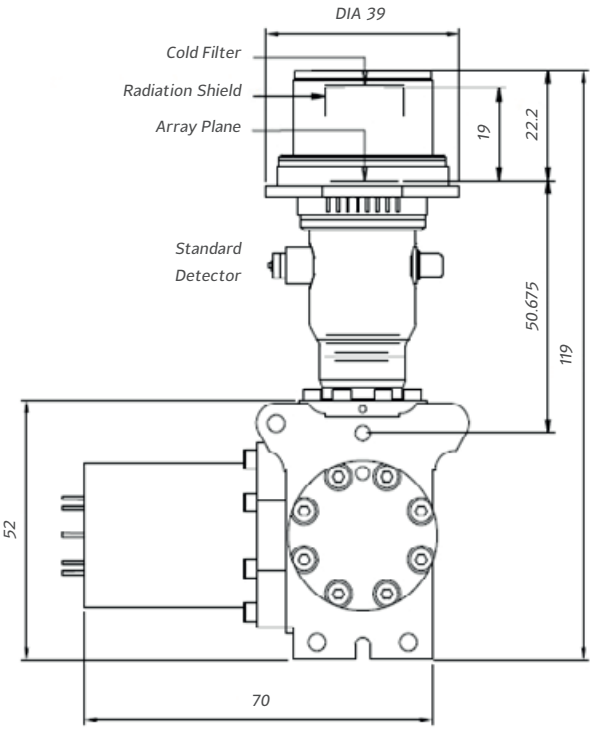
ICDA 6W

Weight	350g
Power consumption	6W steady state
Cooling engine	Rotary Stirling engine
Operating temperature range	-40°C to +70°C

IDCA 8W

Weight	500g
Power consumption	8W steady state
Cooling engine	Rotary Stirling engine
Operating temperature range	-40°C to +70°C

IDCA 6W



For more information:
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