

ZAFIRO[®] HD-MW

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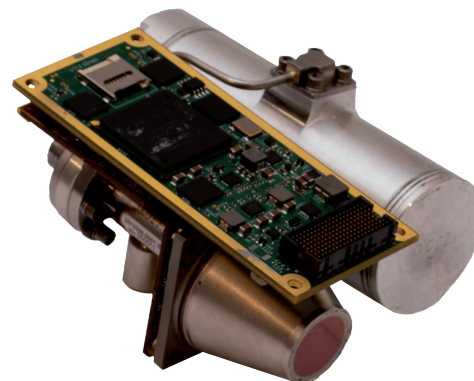
HIGH DEFINITION IMAGING, THE NEW STANDARD FOR IMAGE CLARITY

Leonardo DRS' High-Definition Infrared Zafiro[®] HD-MW Sensor Module provides all the performance of a long-range capable, cooled MWIR camera in a small, low-power package. The Integrated Dewar Cooler Assembly (IDCA) utilizes Leonardo DRS' HDVIP[®] (High Density Vertically Integrated Photodiode) HgCdTe detector technology to deliver high sensitivity.

Performing at an industry low 12 watts of power dissipation at room temperature, the Zafiro[®] HD-MW Sensor Module provides a 20,000-hour cooler Mean Time To Failure (MTTF). Using 12 μ m, micro-pixel spacing allows Leonardo DRS to offer this HDTV format (720p) product in an affordable, compact package without compromising imaging performance. Additionally, the 14-bit corrected digital video capability helps to ensure system video of the highest possible quality.

Measuring 2.1 x 3.5 x 4.2 inches and weighing approximately 1.4 pounds (without brackets), the Zafiro[®] HD-MW is designed to address the most demanding applications. Its compact size and ultra-low power

consumption makes it the perfect choice for thermal imaging applications that require superior performance and resolution in a low size, weight, and power package.

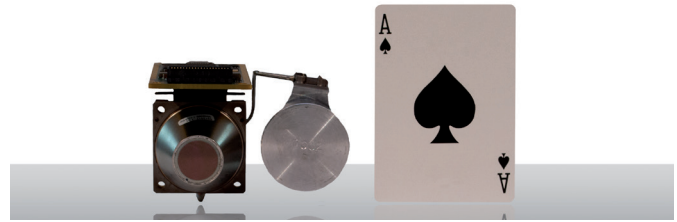


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 **LEONARDO DRS**

FEATURE/BENEFITS

- HgCdTe HDVIP[™] Technology
- 1280 x 720 MWIR HDTV pixel resolution (720p)
- Advanced 12 μ m pixel pitch design
- 14-bit corrected digital video
- Full tactical military package
- Available with various long-life coolers depending on thermal enrichment



FOCAL PLANE ARRAY

COMPONENT	DESCRIPTION
Array Format	1280 x 720
Detector Material	HgCdTe
Detector Pitch	12 μ m
Spectral Response	3.7 - 5.1 μ m (standard)

ROIC FEATURES

Modes	Snapshot operation Direct inject input circuit Read then integrate Programmable integration time Blooming control Programmable gain Mode control through serial interface
Window Modes	Programmable down to 128 x 1
Well Capacity	7.5E6 carriers
Output Dynamic Range	72 dB
Readout Noise	150 μ V rms
Frame Rate	30 Hz / 60 Hz nominal

COOLER

MTTF	20,000 hours
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PERFORMANCE

Noise Equivalent Temperature Difference	< 20 mK Typical @ f/2.5
Operability	99.5%

Camera Link[®] is a registered trademark of the Automated Imaging Association.

SYSTEM ELECTRICAL INTERFACE

COMPONENT	DESCRIPTION
Sensor Warm Electronics Input Power	5 volts 6 watts typical
Cooler Input Power @ 23° C	6.0 watts typical
Max Cooler Input Power During Cooldown	22 watts
Sensor Control	RS-422 Command Interface (optional external frame sync)
Sensor Output	Camera Link [®] Digital Corrected Video (14-bit) Sensor Status Messaging

ENVIRONMENTAL PERFORMANCE

Operating Temperature	-40°C to 71°C (-40°F to 160°F)
Cooldown Time	5.5 min. typical at room temperature

MECHANICAL CONFIGURATION

Package Type	Tactical Dewar with integrated cooler and interface electronics Cooler drive electronics available
Size (Sensor Module) (H x D x L)	2.1 x 3.5 x 4.2 inches (5.334 x 8.89 x 10.668 cm)
Weight	1.4 lbs. (635 grams) - without brackets +0.17 lbs. (77 grams) Cooler Control Module (optional)
ColdShield Information	Standard Options: f/2.5 and f/4.0 Standard ColdShield HT: 1.01 inches (free space equivalent at operating temperature)

Electro-Optical Infrared Systems

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