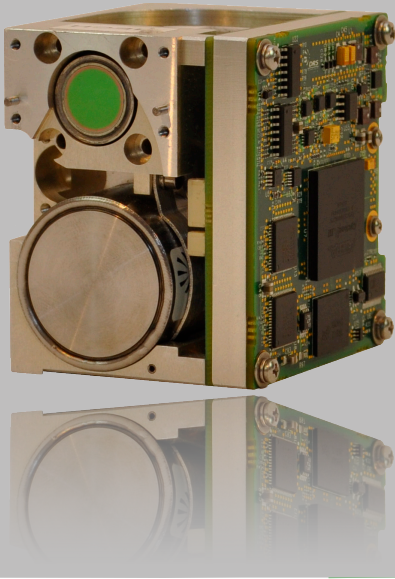


Cooled Performance in a Small, Low Power Package

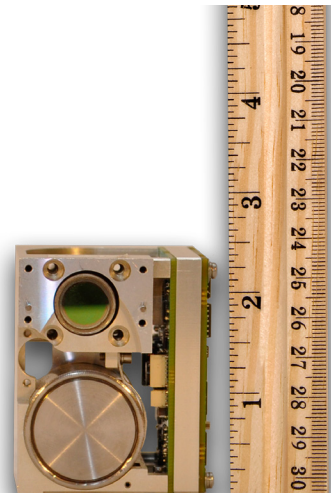


ZAFIRO™₆₄₀ MICRO

DRS Technologies' Zafiro™₆₄₀ Micro is a low power, ultra-compact MWIR 640 x 480 camera core for the most demanding imaging applications. Weighing less than 0.9 pounds and requiring only 5 W of power at room temperature, this sensor, complete with corrected video, enables both battery-powered and very space-restrictive applications.

At the heart of the camera core is DRS' Integrated Dewar Cooler Assembly (IDCA). Utilizing a 12 μm pitch HgCdTe Focal Plane Array (FPA) that enables smaller and lighter optics, along with DRS' industry leading long-life cooler technology, the IDCA enables all the performance of a long-range capable cooled MWIR sensor in a small, quiet, low power package. With camera-ready electronics included, the Zafiro™₆₄₀ Micro compact thermal imager enables new solutions for the dismantled soldier, small gimbal payloads and other low size, weight and power (SWaP) applications.

- HgCdTe HDVIP™ Technology
- 640 x 480 MWIR pixel resolution
- Advanced 12 μm pixel pitch design
- Industry-leading small package
- Low power operation
- 14-bit corrected digital video



SYSTEM FEATURES

FOCAL PLANE ARRAY

Array Format	640 x 480
Detector Pitch	12 μm
Detector Material	HgCdTe
Spectral Response	3.4 μm - 4.8 μm (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
Well Capacity	7.7E6 carriers
Output Dynamic Range	70 dB
Readout Noise	150 μV
Maximum Pixel Output Rate	80 MHz
Frame Rate	30 Hz/60 Hz nominal/120 Hz max

PERFORMANCE

Noise Equivalent Temperature Difference	25 mK Typical
Operability	>99%

COOLER

MTF	12,000 hours
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SYSTEM ELECTRICAL INTERFACE

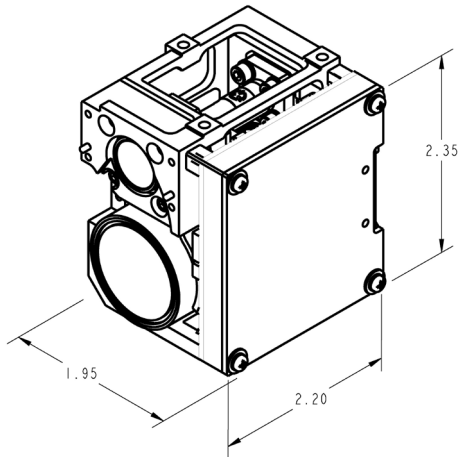
Voltage	24 V, 5 V
Input Power Steady State @ 23°C	5 W typical
Input Power Steady State @ Maximum Ambient	8.0 W typical
Max Input Power During Cooldown	15 W
Input Timing Signals	Frame Sync / Pixel clock / Serial command data
Output Video Format	Base Camera Link, Monochrome NTSC
Serial Interface	via Camera Link or LVDS full duplex
Image Polarity	Selectable

ENVIRONMENTAL PERFORMANCE

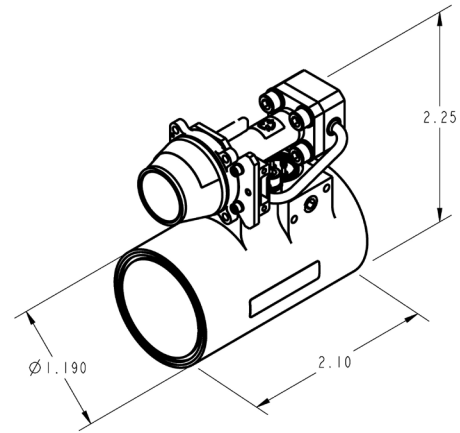
Operating Temperature	-40°C to 71°C (-40°F to 160°F)
Cooldown Time	< 2.5 minutes typical at room temperature

MECHANICAL CONFIGURATION

Package Type	Tactical Dewar with integrated cooler, interface electronics and cooler electronics
Size (H x W x L)	2.35 x 1.95 x 2.20 inches
Weight	< 0.9 lbs. with IDCA and Electronics in Chassis < 0.6 lbs. with IDCA only
f/no.	f/3.25 nominal, f/4.0 available New design upon request



Camera Core



Integrated Dewar Cooler Assembly (IDCA)

* Specifications subject to change without notice. Export of the commodities described herein is strictly prohibited without a valid export license issued by the U.S. Department of State, Directorate of Defense Trade Controls, prescribed in the International Traffic in Arms Regulations (ITAR), Title 22, Code of Federal Regulation, Parts 120-130.



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