

IRE 320S Short-wave Infrared Camera

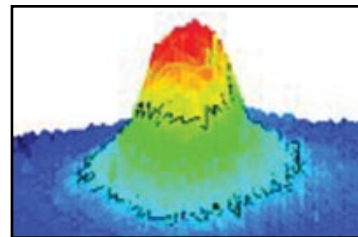
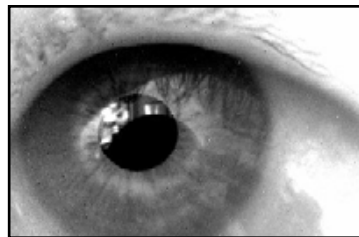
High Sensitivity, Cooled MCT Detector Array



The Sofradir EC IRE-320S infrared camera harnesses the full performance of the Sofradir Mars SW Mercury Cadmium Telluride (MCT) focal plane array (FPA). The Mars SW is a 4-stage TE-cooled infrared detector with a 320x256 pixel array having a SWIR spectral response capability of detecting in the 800nm-2500nm spectral range. The IR FPA takes advantage of an optimized, high performance photovoltaic technology ideal for imaging in the short-wave infrared region beyond 1700 nm. The camera offers unique flexibility to meet the needs of any OEM requirement or application, including: two-dimensional spectrometry, laser beam profiling and hyperspectral imaging. The infrared staring detector operates in snapshot mode and has a user-adjustable variable frame rate and user-adjustable variable integration time.

The camera can generate both corrected or uncorrected analog video output as well as 14-bit digital data. Communication is accomplished with a serial RS-232 interface. The 14-bit digital image data is streamed via LVDS or through optional Camera Link and/or Gigabit Ethernet. The IRE-320S housing includes a C-mount for infrared lenses, and a user-interface back panel having connectors. In addition, Sofradir EC offers a variety of software developer toolkits (SDKs) and command software modules for further flexibility.

- High frame rates up to 200Hz
- High performance 320x256 detector format
- 800nm-2.5µm SWIR spectral response
- High sensitivity
- Customizable camera
- 30 micron pixel technology



- Hyperspectral Imaging
- Spectroscopy
- Laser Beam Profiling

FEATURES

High performance 320x256 imaging in SWIR with the 30µm Mars MCT array

14-bit digital output via LVDS or optional Camera Link and/or Gigabit Ethernet; Plug and play OEM operation

High frame rate (200Hz for 320x256)

Multiple SDKs

On-board non-uniformity correction and bad pixel replacement

IRE320S High Performance Infrared Imaging

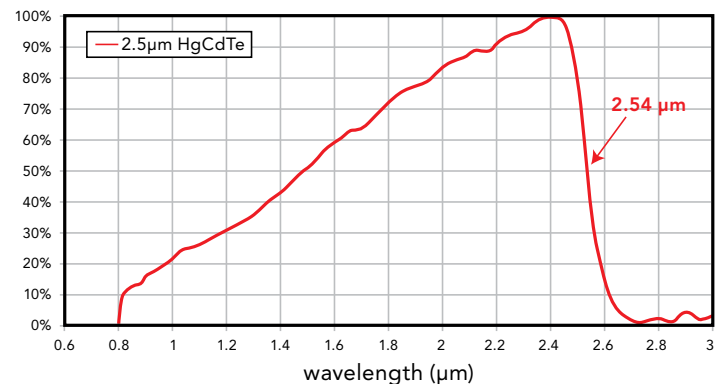
IRE-320S Short-wave Infrared Camera High Sensitivity, Cooled MCT Detector Array

SPECIFICATIONS

Infrared Focal Plane Array	Sofradir Mars SWIR
Detector size	320x256
Pixel Pitch	30 μ m
Spectral Response	800nm to 2500nm
Readout	Snapshot Integration (IWR)
Gain Settings	1
Well Capacity	1.3 Me-
Quantum Efficiency	> 90%
Operability	> 99%
A/D	14-bit
F-number	0.6
Frame Rate (full frame)	Variable 1 to 200Hz
Integration Time Control	3 μ s to 20ms
Trigger/Sync	0-5V TTL in/out with delay
Digital Output	LVDS; Gigabit Ethernet optional; Camera Link optional
Analog Video Output	RS-170
Video Symbology	User definable for video output overlay
Non-uniformity Correction	On board (4 tables)
Bad Pixel Replacement	On board (4 tables)
Cooling	4-Stage Thermo Electric Controller
Cool Down Time	5 minutes
Weight w/o Lens	< 4 kg
Operational Temperature	-30°C to 55°C
Shock	MIL-SPEC 810G
Vibration	MIL-SPEC 810G
Optical Mount Interface	C-Mount or custom
User Interface Panel	Standard connector interface for LVDS, Camera Link, GigE, Analog Video, Sync In/Out, IRIG, and power.



Normalized Spectral Response



ORDERING INFORMATION

CAMERA

IRE-320S SWIR Camera	915159
Includes housing with C-mount, connector interface back panel and power supply.	

DIGITAL INTERFACE OPTIONS

Gigabit Ethernet	915173
Camera Link (does not include frame grabber or cable)	915174
C++ Software Development Tool Kit	915189

OBJECTIVE LENSES

Contact us

Technical characteristics described in this data sheet are for information only and are not contractual. Because of ongoing product enhancements, specifications are subject to change without notice. Export of these products from the United States is controlled by the US Government. Prior authorization is required for re-export or transfer.

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