

MIRA 02Y-E

SMALLEST SWIR CAMERA WITH INTEGRATED ALPD*
FROM THE LEADER IN SWIR SENSORS FAST ALPD UP TO 50kHz

THE NEXT GENERATION OF VIS-SWIR IMAGING WITH ADVANCED FEATURES

The Mira 02Y-E camera – powered by the SCD Swift-EI sensor – is a significant advance in VIS-SWIR imaging, with a low SWaP-C architecture and advanced integrated features.

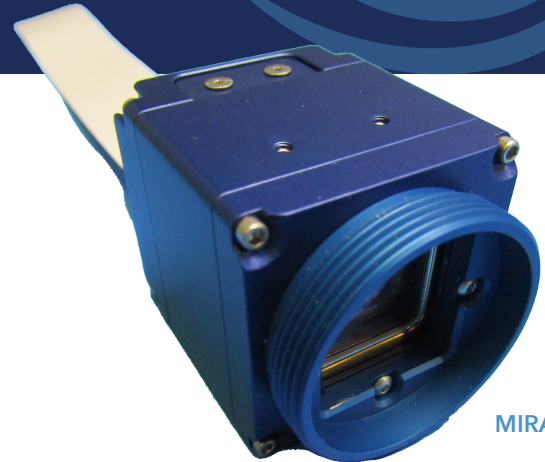
The VGA format camera uses a standard definition 640x512 format InGaAs detector with a 10µm pixel pitch, designed for SCD's high volume semiconductor manufacturing process.

Mira features high-sensitivity and wide dynamic range. It provides real-time imaging with response across the Visible (VIS) through the SWIR waveband. Built-in Automatic Gain Control (AGC), image enhancement, and Non-Uniformity Correction (NUC) allow for seamless system integration and ease-of-use.

Data is provided through a MIPI interface. Control is accomplished via a serial port interface.

The camera has the ability to detect, track and decode multiple laser spots in the camera field of view.

Noise and image stability are optimized through proprietary thermal stabilization techniques. The thermal design of the camera ensures operation up to 85°C.



MIRA 02Y-E

BENEFITS

Low SWaP-C

Low size, weight and power while maintaining high-sensitivity and low noise.

Integrated ALPD

Asynchronous Laser Pulse Detection.

APPLICATIONS

- UAV and Gimbal Applications
- Handheld imaging
- Laser spotting and targeting
- Semiconductor Inspection
- Airborne reconnaissance
- Bio Applications

* Asynchronous Laser Pulse Detection

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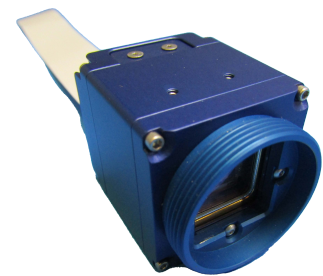
SYSTEM FEATURES

- 640 x 512, 10 μ m pixel pitch resolution
- (Optional) Simultaneous standard imaging and neuromorphic (event-based) imaging
- (Optional) Simultaneous standard imaging and fast ALPD channel
- (Optional) Detect, track and decode multiple laser spots in the field of view (FOV)
- (Optional) High frame rate operation (image only) up to 1.5kHz
- Programmable operation (Automatic Gain Control, Automatic Exposure Control, External Trigger)
- MIPI and Camera Link™ interface
- Mil-spec environment
- Spectral response from 0.4 μ m to 1.7 μ m

MIRA 02Y-E SWIR VGA CAMERA

PARAMETER	VALUE	COMMENTS
Sensor Type	InGaAs	
Sensor Readout	Full-frame, snapshot	Event-based imaging available
Image Format	640 x 512	100% fill factor
Pixel Size (μ m)	10	
Spectral Response (μ m)	0.4 - 1.7	See QE plot
ELECTRICAL		
Frame Rate (Hz)	30 - 60	Imaging up to 1,500Hz
Dynamic Range (dB)	70	
ALPD FAR (%)	<0.3	@100pA background
Power Dissipation (W)	1.0 - 1.5	
MECHANICAL		
Housing Material	Aluminum/Copper	
Lens Mount	C-Mount	
Weight (grams)	51.6	75.9 with lens mounting hardware
Dimensions (Inch)	1.2 x 1.2 x 1.29	
POWER AND SIGNAL INTERFACE		
Power Input (V)	5 - 13	DC
Data	MIPI CSI-2	Opt. adapter w/ Camera Link™ SDR connector
Trigger/Sync		Camera Connector I/O pins
Mode Control	Serial port	Via UART
ENVIRONMENTAL		
Operating Temp (°C)	-40 to +85	
Storage Temp (°C)	-50 to 85	
Humidity	Up to 90%	Non-condensing

FRONT/TOP

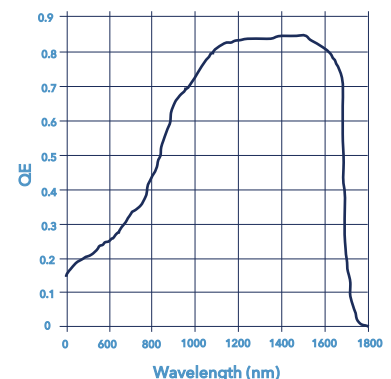


BACK/TOP



Tripod mount available

Spectral Response



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