



# MICROXCAM-384i-THz

## Terahertz Camera

The MICROXCAM-384i-THz is a camera based on the sensitive INO 384 x 288-pixel uncooled microbolometer FPA optimized for the terahertz waveband. Due to its longer wavelength, THz band offers unmatched penetration depth for seeing through materials such as fabric, ceramic, plastic, leather, or cardboard. Thus, the camera shows sensitivity over a wide spectral range, providing live video images. It features a very small footprint: 61 x 61 x 65 mm

The camera electronics handles raw data acquisition and data transfer over GigE, providing 16-bit raw image outputs at 50 Hz. The camera can be further equipped with ultra-fast 44 mm focal length refractive optics optimized for the THz region.

### APPLICATIONS

- Package inspection
- Manufacturing
- Security screening and surveillance
- Concealed weapons detection
- Vision through camouflage
- Quality control, process monitoring
- Spectroscopy
- Submillimeter astronomy
- Dental and medical imaging
- Food inspection

### BENEFITS

- Wide band response
- High sensitivity
- 16-bit raw data
- High image quality
- Refractive optics available



Visible image  
Magnetic Card

Visible image of  
opened card with  
THz transmission  
strips

Mosaic of THz  
image strips taken  
of sealed card





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CAMERA SEPCIFICATIONS <sup>(1)</sup>	
Waveband <sup>(2)</sup>	70 - 3189 $\mu$ m / 4.25 – 0.094 THz
Sensor <sup>(2)</sup>	<ul style="list-style-type: none"><li>• 384 x 288 pixels uncooled microbolometer FPA</li><li>• 35<math>\mu</math>m pixel pitch</li><li>• Silicon float zone window</li><li>• AR coating optimized for specific THz wavelengths</li></ul>
Frame rate	50 Hz
Video output	GigE Link <ul style="list-style-type: none"><li>• RJ-45 connector</li><li>• 16-bit raw data</li></ul>
Supply	12 VDC Nominal (10VDC to 15VDC)
Power	< 3 W (excluding TEC power)
Dimensions	61 mm (H) x 61 mm (W) x 65 mm (L) 2.4 in. (H) x 2.4 in. (W) x 2.6 in. (L)
Weight	360g / 0.8 lb (excluding optics)
Temperature	0 to 40 °C

OPTICS SPECIFICATIONS	
Specifications <sup>(3)</sup>	Ultrafast Optics
Type	Refractive
Focal length	44 mm
F number	0.7
Object distance	60 cm to infinity
Lens material	HRFZ-Si
AR coating	Parylene-C
Number of lenses	2
Dimensions	80 mm ( $\varnothing$ ), 66.5 mm (L)
Weight	350 g



Ultrafast Optics

F/0.7

(1) Subject to change.

(2) Detector and coating may vary depending on the selected wavelength.

(3) Custom specifications available on demand.