



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 fast or 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 ⁽¹⁾	
Waveband ⁽²⁾	70 - 3189 μ m / 4.25 – 0.094 THz
Sensor ⁽²⁾	<ul style="list-style-type: none">• 384 x 288 pixels uncooled microbolometer FPA• 35μm pixel pitch• Silicon float zone window• AR coating optimized for specific THz wavelengths
Frame rate	50 Hz
Video output	GigE Link <ul style="list-style-type: none">• RJ-45 connector• 16-bit raw data
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 ⁽³⁾	Fast Optics	Ultrafast Optics
Type	Refractive	Refractive
Focal length	44 mm	44 mm
F number	0.95	0.7
Object distance	90 cm to infinity	60 cm to infinity
Lens material	HRFZ-Si	HRFZ-Si
AR coating	Parylene-C	Parylene-C
Number of lenses	2	2
Dimensions	80 mm (\varnothing), 52 mm (L)	80 mm (\varnothing), 66.5 mm (L)
Weight	235 g	350 g



Fast Optics
F/0.95

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.