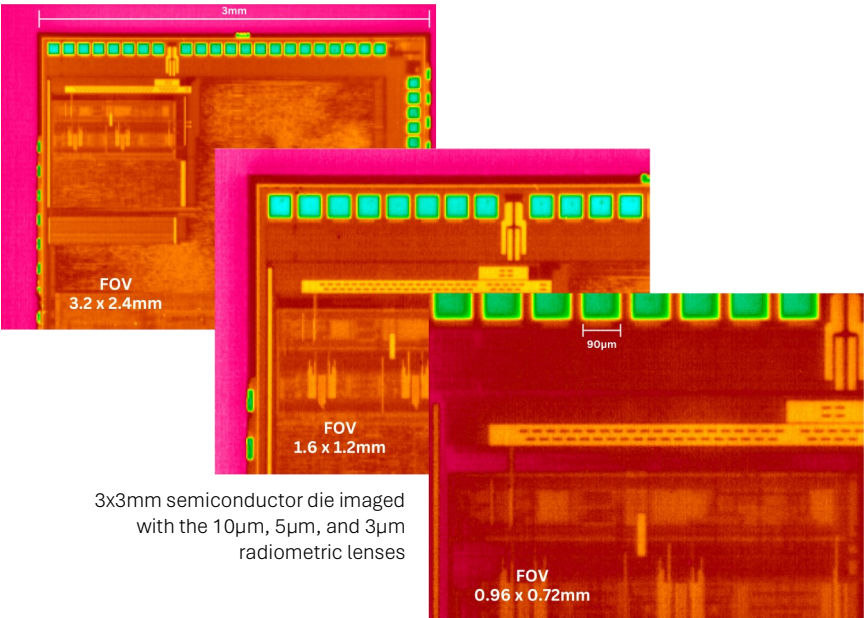


Micros LWIR Thermal Imaging Microscope

Released in 2024, Micros offers 3µm spatial resolution at an affordable price. Micros applications include microscopic temperature analysis of electronics, MEMS devices, biological samples, and materials.

Optotherm's turnkey systems can include components such as linear stages, breadboards, and enclosures, creating a complete analysis system. The base Micros configuration includes the IS320-12 LWIR camera, radiometric 10µm lens, and Thermalize analysis software.



3x3mm semiconductor die imaged with the 10µm, 5µm, and 3µm radiometric lenses



Features

- Minimum spatial resolution: 3µm
- Complete, turnkey system (Optotherm designed camera, lenses, software, and camera positioning system)
- Available radiometric lenses: 10µm, 5µm, 3µm
- Easy-to-use interchangeable threaded lenses
- Compact design
- Configurable system for specific applications
- Optional supporting components for specific applications

Applications

- MEMS**
 - MEMS devices
- Electronic Devices**
 - Semiconductor die
 - SMD components
- Medical/Biological**
 - Biological samples
 - Medical devices
- Materials**
 - Defects
 - Temperature gradients
 - Laminated materials
 - Exo/endothermic materials
- Optical Devices**
 - LCD displays
 - Laser diodes
 - LEDs

Options

- Configurations**
 - Camera, Software, Radiometric 10µm Lens for <\$12K (USD)
 - Camera, Software, 10µm, 5µm, and 3µm Radiometric Lenses for <\$20K (USD)
- Camera Positioning Systems**
 - Simple z-axis camera positioning system (automatic or manual) with 300x300mm breadboard
 - Portable and compact desktop version (automatic or manual)

Thermalize Image Analysis Software Capabilities

Thermalize provides an extensive set of analysis tools to help you characterize the performance of devices and materials in many different and insightful ways.

Image Overlay	Import pictures or schematics to overlay and merge with thermal images
Image Subtraction	Analyze differential temperatures over time to easily view heating and cooling
Emissivity Tables	Compensate pixel by pixel surface emissivity variations
Instrument Control	Control a number of Tektronix power supplies and source meters
Sequences	Create thermal imaging movies and export as
Regions	Draw regions over any shape or size and display temperature statistics of pixels enclosed by each region
Graphs	Create real time line profiles, histograms, and strip charts of region temperature statistics

IS320-12 LWIR Camera Specifications

Infrared Detector	Uncooled amorphous silicon microbolometer
Array Size	320 x 240 pixels
Frame Rate	60Hz
Detector Pitch	12µm
Noise Equivalent Temperature Difference	<40mK
Spectral Response	8-14µm
Thermal Time Constant	<10ms
Compatible radiometric lenses*	10µm, 5µm, 3µm

*Each lens name represents the dimensions of the area on the target that is imaged onto each detector pixel. Therefore, each pixel in the resulting image for the 10µm lens will represent an area that is 10 x 10 µm.