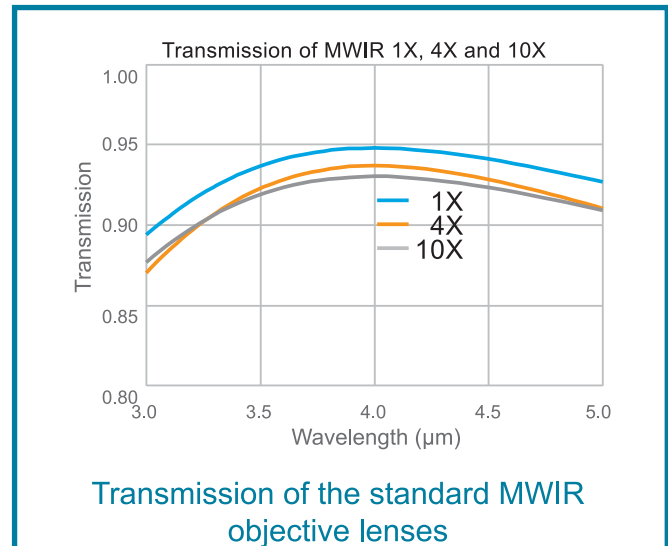


SEMICAPS THM

THERMAL MICROSCOPY

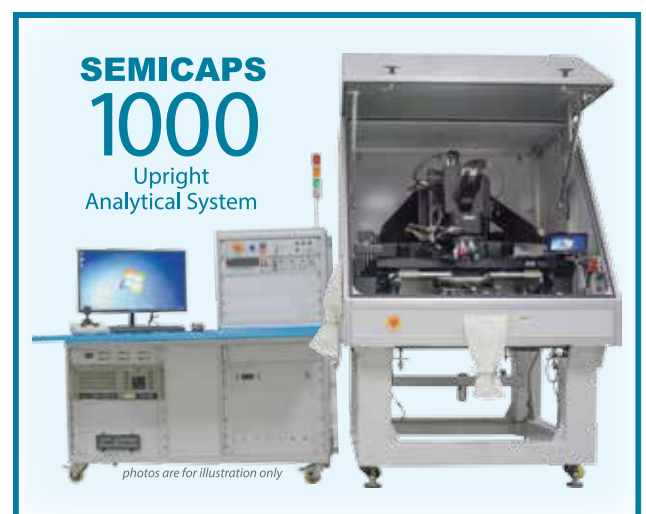
The SEMICAPS Thermal Microscopy is used in semiconductor analysis laboratories for thermal imaging to detect hot-spots. These hot-spots are often caused by electrical shorts and current leakages that are often due to the breakdown of the oxide layer.
For use with all SEMICAPS platforms.



The SEMICAPS THM uses an InSb or MCT detector array for MWIR imaging.
The par focus lenses make it easy to switch from lens to lens

Features

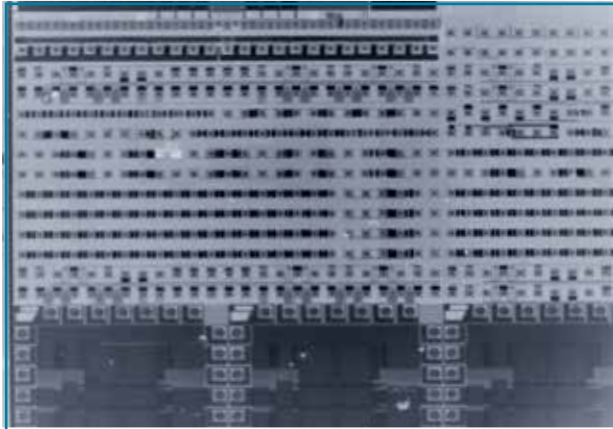
- Analytical or tester-docked, upright or inverted, configurations
- High resolution stirling-cooled MWIR detector
- High throughput IR lenses
- 3 position angled objective turret
- Navigation CCD for high resolution background overlay
- Automated detector par centering
- Room temperature imaging
- Incorporate into combine microscope
- Par-focus
- Lock-in thermography option
- Montage option



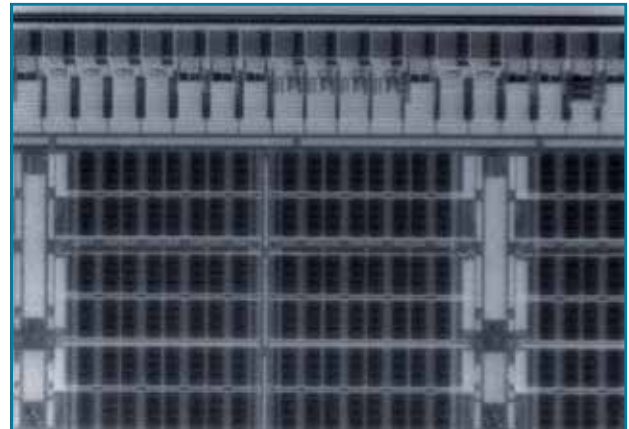
SEMICAPS THM

THERMAL MICROSCOPY

The SEMICAPS THM uses an InSb or MCT detector array for MWIR imaging. The par focus lenses make it easy to switch from lens to lens



4X magnification
front side image at room temperature

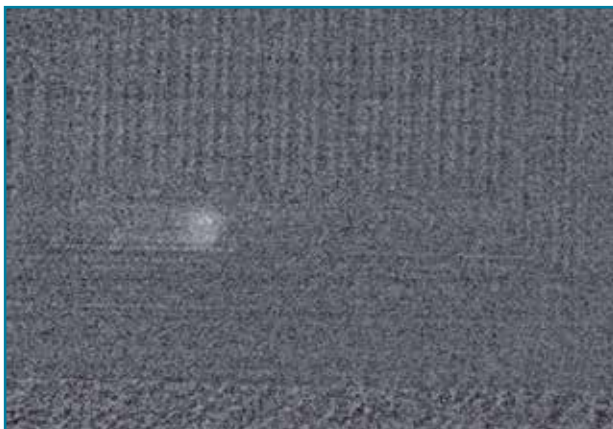


10X magnification image through
780um thick silicon at room temperature

AVAILABLE OBJECTIVES

	Standard			
Magnification	0.3X	1X	4X	10X
Objective NA	0.08	0.22	0.41	0.63
Working Distance/mm	80.8	16.5	15.7	15.2

These hot-spot images are conveniently overlaid onto the actual image of the IC to enable quick localization of the defects. In addition, the THM can also be used to perform thermal mapping and profiling so that engineers can determine potential regions in a working IC that may result in reliability issues.



Lock-in thermal emission image of a
hot-spot dissipating 2uW of power
(biased at 1V, 2uA).



Overlay of thermal emission
(in pseudo color and after thresholding)
on the thermal background image.