

TIFAS[®] IR Lab

Thermal Imaging-Based Failure Analysis System

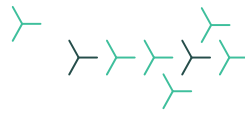


IR thermography failure analysis in a nutshell

Give it all. There's insight inside.

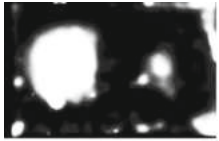


Non-destructive failure analysis as compact as never before.

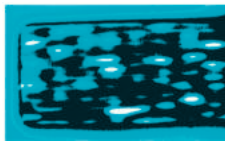


TIFAS IR is a very compact desktop system for failure analysis with infrared thermography that provides everything required for the application of a wide range of different failure analysis techniques and for testing the entire spectrum of electronic components, systems, composites, laminates or sintered parts.

- ❑ Voids, cracks, delamination
- ❑ Inclusions or missing parts
- ❑ Thermal bottlenecks
- ❑ Non-destructive
- ❑ Contactless
- ❑ Thermal phenomena
- ❑ Compact benchtop system
- ❑ Automated foil lamination
- ❑ 1 kJ flash lamp for thermal excitation



Voids in solder die attach layer

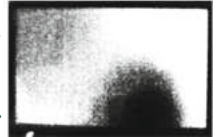


Voids in carbon fiber reinforced polymer

Delamination in sintered power module



Large-area delamination in sintered die attach layer



Thermal phenomena guide the way

As heat travels from the source to the environment, it can encounter obstacles that can severely limit the reliability of a component.

In the electronics and mechanical engineering industry, there are countless different faults that cause this behavior. However, they all have one thing in common: such symptoms are best detected by directly observing the heat and its progression. IR thermography is the tool of choice and TIFAS IR combines method, hardware and software in a compact desktop system.

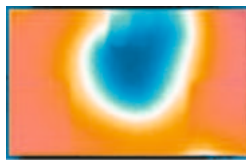
Plug and play



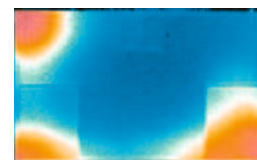
Sintered DCB



0 MPa



2 MPa



5 MPa



10 MPa

————— **bad** ————— **Sinter pressure** ————— **good** —————>

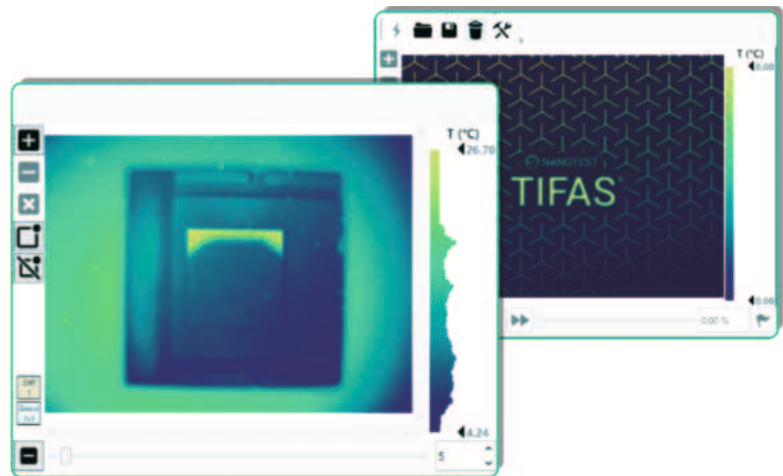
Hands on usability

TIFAS IR Lab comes with a comprehensive touch-based software that guides through measurement and provides a long tool belt of image acquisition and analysis features.

The software is fully touch-optimized, making it ultimately easy to use in a lab environment.

Software features

- ❑ IR image acquisition
- ❑ Synced flash excitation
- ❑ Automated analysis
- ❑ Various post-processing algorithms
- ❑ Thermal signal reconstruction
- ❑ Not system-exclusive / distributable
- ❑ Optimized for multi-core processing



learn more

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