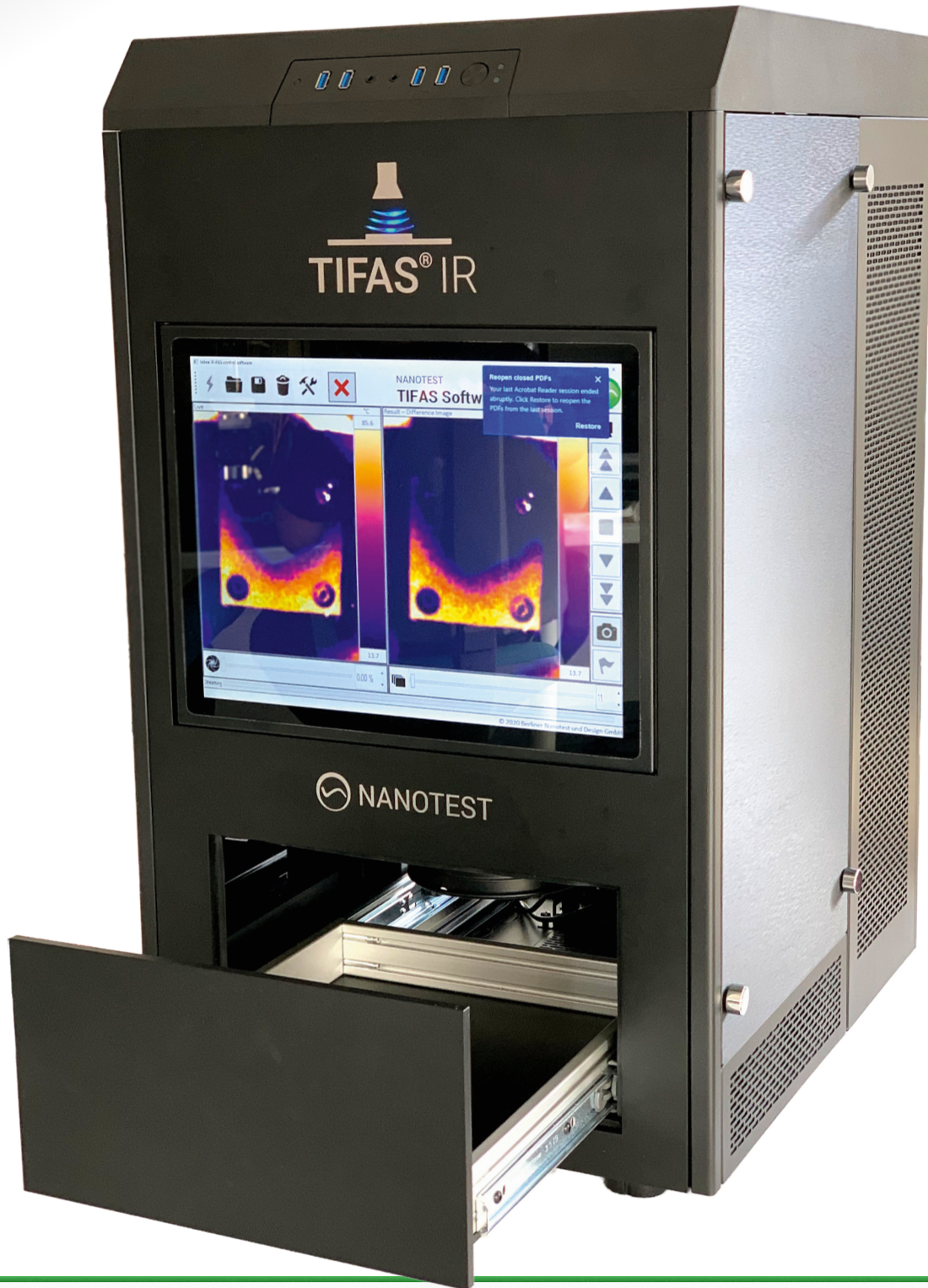




NANOTEST
Berliner Nanotest und Design GmbH

TIFAS[®] IR



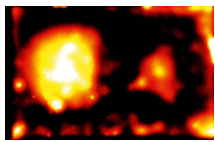
Thermal Imaging-Based
Failure Analysis System

IR thermography
failure analysis
in a nutshell

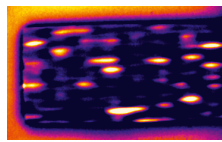
Non-destructive failure analysis as compact as never before.

TIFAS IR is a highly compact desktop system for infrared thermography-based failure analysis that brings everything necessary to apply a wide range of various failure analysis techniques and to inspect the full spectrum of electronic components, systems, composites, laminates or sintered parts.

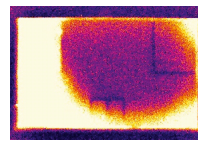
- ▶ Voids, cracks, delamination
- ▶ Inclusions or missing parts
- ▶ Thermal bottlenecks
- ▶ Non-destructive
- ▶ Contact-less
- ▶ Thermal phenomena
- ▶ Compact benchtop system
- ▶ All-inclusive hardware
- ▶ Comprehensive software



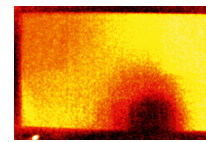
Voids in solder die attach layer



Voids in carbon fiber reinforced polymer



Delamination in sintered power module

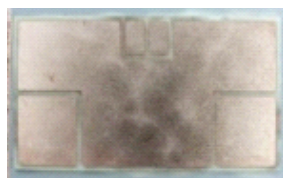


Large-area delamination in sintered die attach layer

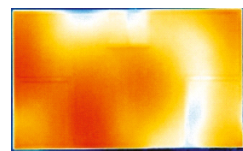
Thermal phenomena guide the way

When heat takes its way from source to ambience it can hit obstructions that may severely narrow a component's reliability. In electronics and mechanical industry we look at countless different defects that cause this behavior. Yet, they have all one thing in common: such symptoms are best discovered by directly observing the heat and its path. IR thermography is the tool of choice and TIFAS IR brings method, hardware and software all together in one compact desktop system.

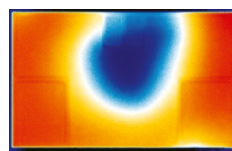
Plug and play.



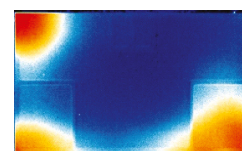
Sintered DCB



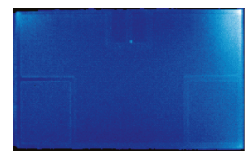
0 MPa



2 MPa



5 MPa



10 MPa

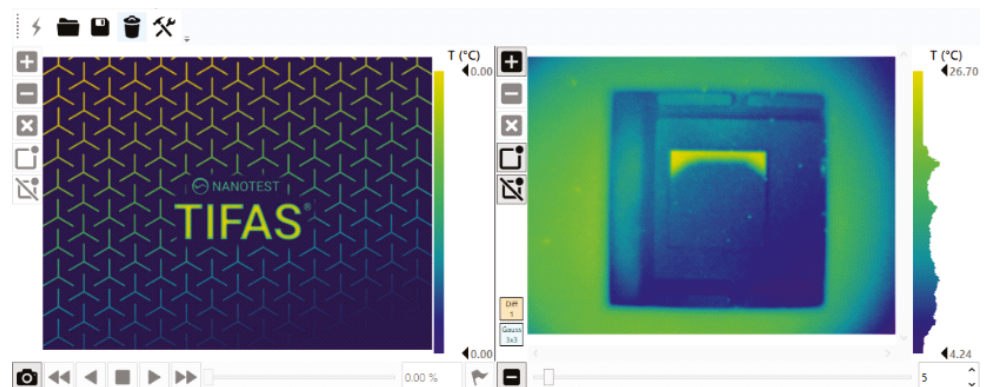
————— bad ————— Sinter pressure ————— good —————>

Hands on usability

TIFAS IR 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 characteristics

- ▶ IR image acquisition
- ▶ Synced flash excitation
- ▶ Automated analysis
- ▶ Various algorithms
- ▶ Thermal signal reconstruction
- ▶ Not system-exclusive



nanotest.eu/tifas