

# Thermotest

Thermal Test Chips and Vehicles



Unleash your thermal reliability testing  
Turnkey TTV solutions

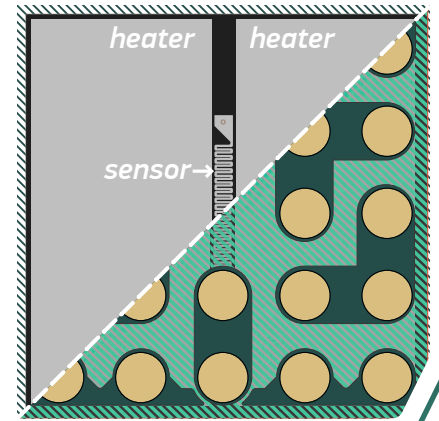


# We start simple to dare the exceptional

The Thermotest product series offers a variety of off-the-shelf products and fully customized solutions. From wafers and pre-packaged thermal test vehicles (TTV) to series of specified high-end packages with customized chip configuration - Thermotest holds all possibilities for your cause.

Nanotest Thermotest wafers combine robustness and flexibility by building on thin-film technology. Besides highly sensitive temperature sensors, the cells include two individual full-area heaters and four health monitoring structures to observe solder bump or wire bond integrity.

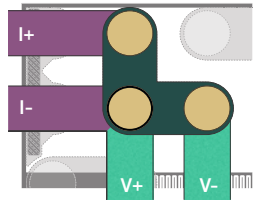
- Silicone TTC wafer
- Flip-chip assembly
- Wire bond assembly
- $2.5 \times 2.5 \text{ mm}^2$  cells
- $10 \Omega/\text{K}$  sensitivity
- $2 \times 15 \Omega$  heaters
- 4-terminal sensing
- $> 11 \text{ W}/\text{mm}^2$



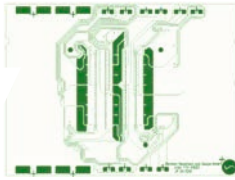
## The TTV you need. No compromises.

Our thermal test chip is a feature-rich breadboard. Size, heating and sensing resolution, assembly, PCB stackup, lid, stiffener ring - *it is all up to you.*

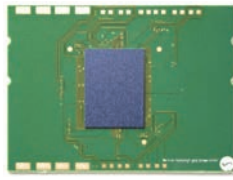
Electrical 4-wire sensing for in-situ state-of-health monitoring of solder bumps



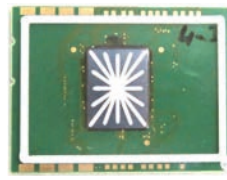
Layout



Assembly



Lidding

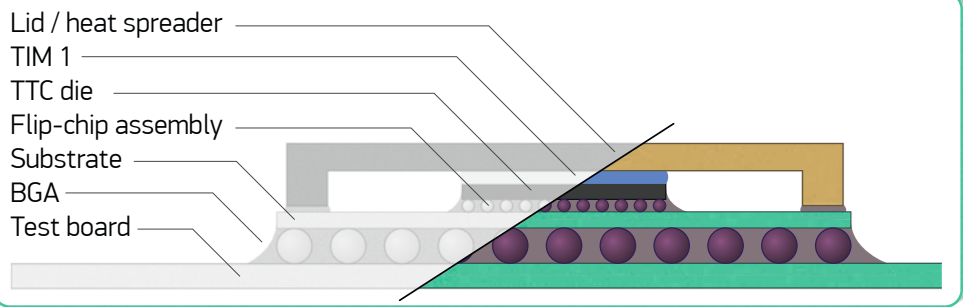


## The most all-round TTV competence you'll find

- Concept and feasibility
- Design and construction
- Substrate stackup and layout
- Assembly and packaging
- Quality assessment
- Calibration and test
- TTV test hard- and software
- On-site setup and support

We support vendors from around the globe to improve their packages' thermal performance by offering turnkey TTV solutions with 360° service.

A free-of-charge concept and feasibility phase is part of our promise.



## Off-the-shelf:

### TTV SAC v3

Compact interface and probe current supply, ready to use with our small-scale NT16-TTV5



learn more

[nanotest.eu/ttv](https://nanotest.eu/ttv)

