

Features:

- **Temperature range [°C]:** -250 to +1000
- **Measurement range [mW/m-K]:** 1 - 2000
- **Sample State:** Solid or Liquid
- **Nominal Specimen length [mm]:** 100.0
- **Nominal Specimen width [mm]:** 50.0
- **Nominal Specimen height [mm]:** 10.0
- **Accuracy [%]:** <5
- **Repeatability [%]:** <3
- **Non-destructive testing of materials**
- Testing of non-standard geometries possible
- Flexible and customizable for special applications including material testing in vacuum
- Suitable for:
 - Aerogels
 - Ceramics
 - Composites
 - Foams
 - Mineral wools
 - Phase Change Materials
 - Powders
 - VIP
- **Available both as a test service as well as a complete measurement instrument with suitable thermal test chamber to suit your material's testing needs.**

Want to test your Material? Get in touch with us:

info@tiwari-instruments.com
+49 174 753 6551

TIWARI Scientific Instruments GmbH
Robert-Bosch-Straße 7
64293 Darmstadt
www.tiwari-instruments.com

SHIEL3D

Thermal Conductivity Instrument



SHIEL3D is a thermal conductivity measurement instrument - based on a space technology - that can determine the thermal conductivity of thermal insulation materials in a matter of minutes and in an extended temperature range from -250°C (cryogenic materials) to 1000°C (fire-resistant materials). The device consists of a thin heating element, which excites the material to be tested with a current of varying frequency from 100 Hz to 1 mHz. The response of the material to the current excitation is recorded in the form of minute voltages which yield the thermal conductivity of the material. The transient nature of the test method means multiple samples can be tested in a single working day making the device suitable for material developers as well as quality control of materials.

About TIWARI Scientific Instruments:

We are a hardware-oriented company incubated by the European Space Agency's Business Incubation Centre in Darmstadt and specialize in Technology Transfer. We identify promising technologies developed for space missions for their benefit on Earth (Spin-off) and adopt emerging terrestrial technologies for the space missions of the future (Spin-in).