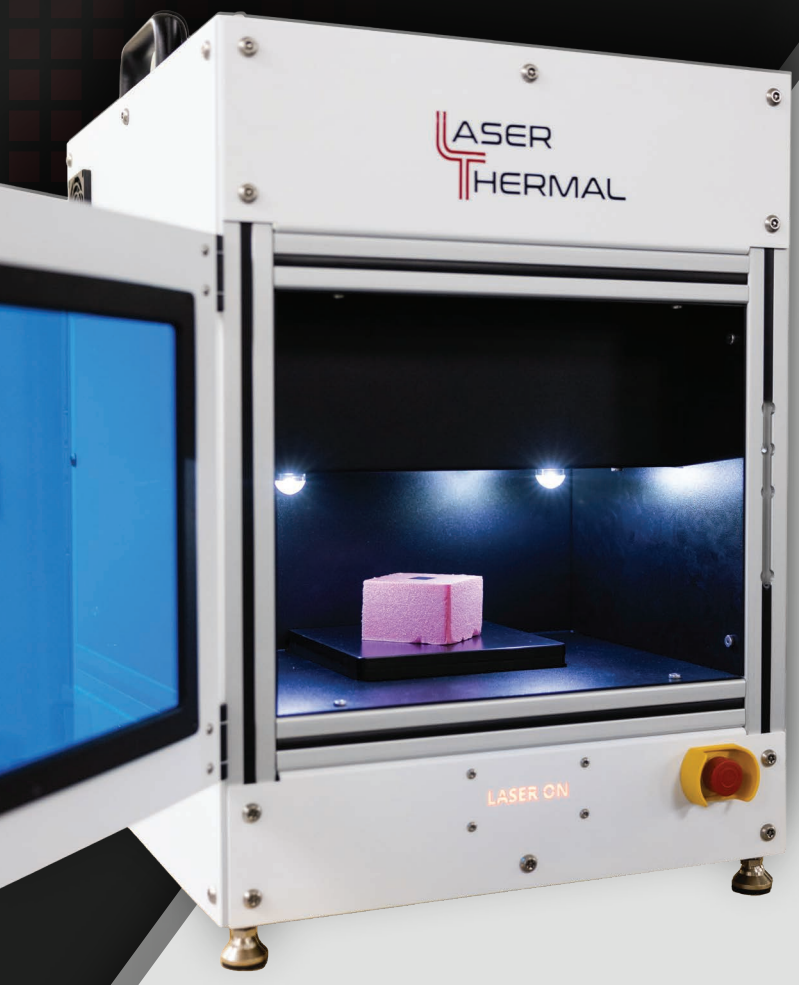
LASER THERMAL

DISCOVER THE FUTURE OF THERMAL CONDUCTIVITY MEASUREMENTS

INTRODUCING LASER THERMAL'S
THERMO-OPTICAL PLANE SOURCE (TOPS)



Harness State-of-the-Art Thermal Conductivity Measurement Technology

The Thermo-Optical Plane Source (TOPS) system is the first of its kind: an optical, non-contact thermal property measurement system developed for traditional bulk scale thermal property characterization of solids, liquids, gels and pastes…all in one instrument.

This fully automated, user-friendly system brings the power of optical measurement technology to a simple, push of a button testing operation, allowing measurements to be made in minutes, on any material, with a high level of repeatability and accuracy.

The intuitive analysis software provides rapid fire results, giving you the data you need to innovate.

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APPLICATIONS

- ✓ Ceramics
- ✓ Films
- ✓ Pastes
- ✓ Liquids
- ✓ Polymers
- ✓ Composites
- ✓ Thermal Interface Materials
- ✓ Foams
- ✓ Environmental materials
- ✓ Gels

INDUSTRIES

- ✓ Materials Science
- ✓ Aerospace
- ✓ Automotive
- ✓ Energy & Power
- ✓ Fabric & Textiles
- ✓ Construction & Building Materials
- ✓ Healthcare & Medical Devices
- ✓ Electronics
- ✓ Academia & Research
- ✓ Insulations

FEATURES

- ✓ Short test cycles no matter the material
- ✓ High accuracy, repeatability, reproducibility
- ✓ Low Maintenance
- ✓ Non-contact measurement
- ✓ Same side heating and detection
- ✓ Laser heating, no instrument warm-up time required
- ✓ Local thermal property measurements
- ✓ Direct measurement of thermal conductivity

BENEFITS

- ✓ Maximizes testing throughput
- ✓ Confidence in your test results
- ✓ Reduce costs, maximize uptime
- ✓ Simplicity
- ✓ Flexible sample geometry and shape
- ✓ Ability to test for variation across a sample area
- ✓ Measurements can be made directly on production parts
- ✓ Do not need to know specific heat capacity or density

SPECIFICATIONS

Measurement Range	0.01 to 60 W/m-K
Temp Range	Room temp. to 100°C
Test Cycle Time	~ 1-3 minutes
Uncertainty	+/- 5%
Repeatability	+/- 1%
Minimum Sample Volume	2x2x2mm^3
Sample Preparation	Surface roughness <1µm rms (120 grit) Apply transducer film
Dimensions	18”W x 25”H x 21”D, 120 Lbs
Electrical	110/220 VAC, 50/60 Hz, 15 Amp

SIMPLIFY YOUR MATERIAL THERMAL CHARACTERIZATION

Reduce Costs for Users

- ✓ Save time and money with shorter test cycles and higher overall throughput
- ✓ Build in greater efficiencies with in-line production quality control

Design Better Products

- ✓ Get better information about property evolution at operating temperatures by testing production-like samples
- ✓ Accelerate materials development and discovery by using a high-throughput method for thermal measurements

Improve Quality Control

- ✓ Accelerate the transition from R&D to production by rapidly screening thermal properties to identify process-property correlations
- ✓ Increase understanding of process variation by testing material during and after production

Rev 03-07-25