

LFA 707 StratoFlash® Classic

Temperature range	RT to 1600°C
Heating rates	0.01 K/min to 50 K/min
Laser system	- Pulsed Nd: Glass - Wavelength 1054 nm - Software-controlled pulse width and voltage between < 0.05 ms and 1.5 ms in steps of 0.01 ms - Adjustable energy: 0.25 - 25 Joules/pulse - Patented pulse mapping for finite pulse correction (patent no.: US20040079886)
Automatic Sample Changer (ASC)	- Sample holder support for 3 insets for samples ≤25.4 mm - Sample holder support for 5 insets for samples ≤12.7 mm
Sensors	InSb (RT to 1600°C), optional LN ₂ refill system including 35 liter dewar
Measuring range	- Thermal diffusivity: 0.01 mm²/s to 2000 mm²/s - Thermal conductivity: 0.1 W/(m·K) to 4000 W/(m·K)
Accuracy*	- Thermal diffusivity: ± 2.5% - Specific heat capacity: ± 5%
Repeatability**	- Thermal diffusivity: ± 1% - Specific heat capacity: ± 3%
Measurement atmospheres	Inert or vacuum (<2x 10 ⁻⁵ mbar; turbomolecular pump)
Specimen dimensions and shapes***	Ø: 6 mm, 8 mm, 10 mm, 12.7 mm, 20 mm, 25.4 mm; thickness: 0.1 mm to 6 mm □: 10 mm x 10 mm, 20 mm x 20 mm; thickness: 0.1 mm to 6 mm
Sample holder material:	Al ₂ O ₃ , graphite
Special sample holder systems	- Molten polymers/low-viscosity liquids (incl. low-viscosity materials such as water) - Sample holder, especially for tests on resins during curing - Pastes, powders, fibers - Laminates - In-plane - Mechanical pressure
Reference materials	Various sets and individual reference materials in different dimensions and shapes
Software including calculation and correction models	Each model can be combined with 4 different baseline corrections (incl. shifted baseline) and w/o pulse correction; display of detector signal and model fit, data export; various special and extended models
Display of detector signal and model fit	- Quality check of the model fit (same plot) - Automatic storage of both curves for each shot

* Deviation of the measured value from the "true value" (literature value) according to validation with reference materials.

** Deviation using the same operator and equipment over a short time according to validation with reference materials.

*** Additional sample holders upon request.