

Specifications TF-LFA L54

	TF-LFA L54		
Sample dimensions	Any shape with lateral dimensions between 2 mm x 2 mm and 25 mm x 25 mm		
Thin film samples	Standard version*	With measurement range extension*	
	Low conductive material: From 30 nm to 20 µm	Low conductive material: From 10 nm to 20 µm	
	Moderate conductive material: From 200 nm to 20 µm	Moderate conductive material: From 10 nm to 20 µm	
	High conductive material: From 1 µm to 20 µm	High conductive material: From 80 µm to 20 µm	
Temperature range	-100 °C up to 500 °C Sample holder for 4“ Wafer (only RT)		
Measured properties	Thermal conductivity: 0.01 W/mK - 2000 W/mK Thermal diffusivity: 0.01 mm²/s - 1200 mm²/s Thermal interface resistance: 0.1 MW/m²K - 100 MW/m²K Volumetric specific heat capacity: 0.1 MJ/m³K - 10 MJ/m³K Thermal effusivity: 1000 Ws1/2/m²K - 100000 Ws1/2/m²K		
Options	Anisotropy	Sample mapping	Flexible Probe Laser
	Hardware and Software extension to extend the capabilities of the system to measure the in-plane thermal transport properties. Thus anisotropy investigations can be performed.	Scanning multiple positions of the sample pointwise or clusterwise. Mapping area: 10 mm² Stepsize: 50 µm	Selectable transducer material (e.g., gold, aluminium, molybdenum, etc.) with optimized probe laser wavelengths to ensure reliable signal detection. An optional dual-laser setup provides maximum flexibility by supporting both transducer materials within one system.
Atmosphere	inert, oxidizing or reducing vacuum up to 10 E-4		
Integrated Camera	Allows the user to view the present sample surface and the position of the laser beams to record the actual measurement position.		
Pump laser	CW Laser (405 nm, 300 mW, modulations frequency up to 200 MHz)		



pushing boundaries

Linseis Messgeräte GmbH | Vielitzerstr. 43 | D-95100 Selb

Probe laser	CW Laser (532 nm, 25 mW)
Photodetector	Si Avalanche Photodetector, active diameter: 0.2 mm, bandwidth: DC - 400 MHz
Power supply	AC 100 V ~ 240 V, 50/60 Hz, 1 kVA
Software	Included. Software package using multi-layer analysis for calculation of thermophysical properties

*Actual thickness range depends on sample

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