

# Proteus® 5.2.1

For the LFA 427, LFA 447 and LFA 457

# NETZSCH

**SOFTWARE  
UPDATE**

The fifth generation of the *Proteus*® measurement and analysis software has been released.

Intensive dialog with users has made it possible to both make detailed improvements to existing functions and implement a series of new ones. The support of many users has played a decisive role in making *Proteus*® even more user-friendly and effective. *Proteus*® 5.2.1 has undergone not only a facelift for a more modern appearance but also technical improvements including:

- *Proteus*® 5.2.1 can be used with Windows XP for LFA 427, 447 and 457; with Windows Vista® for LFA 447, 457 and with Windows 7, 32-bit for LFA 427 new instruments.
- Interactive help for selection of the correct measurement parameters.
- The various evaluation models allow pulse lengths and radial/facial heat

losses, for example, to be accounted for simultaneously.

- Ultra-modern evaluation methods allow two- and three-layer systems (liquids, pastes) and contact resistances to be measured and characterized.
- The software is designed with utmost flexibility in mind and is capable either of fully automatic measurement and evaluation or of being manually operated.
- The thermal diffusivity and conductivity as a function of temperature can be depicted simultaneously in a single graph.
- The  $c_p$  standard option allows specific heat to be measured using the comparative method with a known standard material.
- An evaluation can be saved and re-started at any given time.
- The user interface is available in English, German, French, Russian and Chinese.
- *Proteus*® 5.2.1 allows for even more efficient operation of your LFA and for quicker interpretation and easier documentation of the data gleaned.

Lfa Controller	
<b>Amplifier Gain</b>	57
<b>Optimize Gain</b>	<input checked="" type="checkbox"/>
HSA Card	
<b>Signal Acq. Duration</b>	67560.0 ms
<b>Optimize Duration</b>	<input checked="" type="checkbox"/>
<b>Signal Acq. Points</b>	3000
Laser	
<b>Laser Voltage</b>	700 V
<b>Pulse Width</b>	1.00 ms
Lfa Controller Info	
<b>Amplifier ADC</b>	-0.21 V
<b>Preamplifier ADC</b>	-3.94 V
<b>Baseline Stability Thres.</b>	3.00 V/10s
<b>Baseline Stability</b>	5.87 V/10s
<b>Iris Hole</b>	7
Temperature Controller Info	
<b>Temp. Stability Thres.</b>	0.50 K/30s
<b>Temp. Stability</b>	-0.06 K/30s
<b>Temp. Diff. Thres.</b>	5.0 K
<b>Temp. Diff.</b>	-0.8 K
Sample	
<b>Thickness</b>	6.6800 mm
<b>Diameter</b>	20.0000 mm

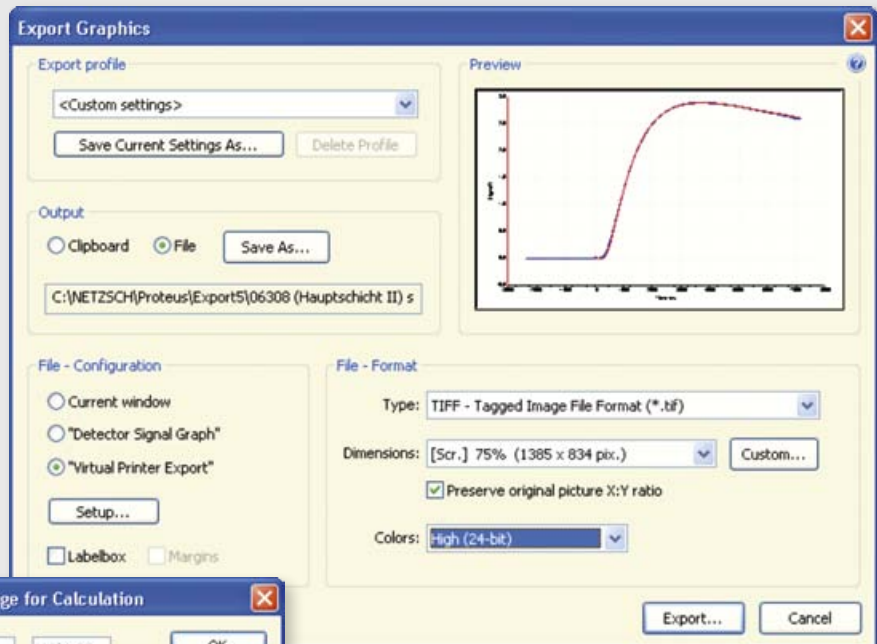
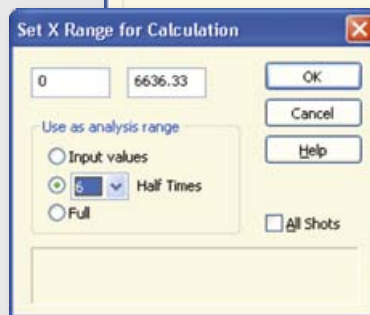
**Parameter window of laser control**

## Measurement

- Improved optimization of measurement parameters: For critical samples, the function for optimizing the duration of data acquisition can be turned off in order to carry out multiple series of shots at a constant duration.
  - Simplified operation of the "Automatic Mode": The function for optimizing the amplification or duration of data acquisition can be activated or deactivated directly in the parameter window.
  - Improved monitoring of the operational functions: If nitrogen is lacking in the Dewar of the IR sensor, the measurement / furnace heating is reliably shut down unless nitrogen is replenished within a certain amount of time.
  - Improved routine for optimizing the duration of data acquisition when radiation spikes occur.
  - Simplified programming of laser parameters for individual shots.
- 1** Direct access to operating manuals, guides and spare parts catalogs in PDF format.

## Analysis

- The output of tables and graphs is centralized under the main menu point 'Output'.
  - Output of the measurement data, parameters and results either to the printer or as a PDF or ASCII file.
- 2** The evaluation graphs can be copied to the clipboard or saved as a file in JPG, TIF, PNG, BMP or EMF format.
- The maximum number of loadable series of shots has been increased from 6 to 32.
- Export of approximated data.
  - For better identification of series of shots, the label box under the measurement curves has been expanded to include curve legend symbols.
  - Quicker import of LFA 447 measurement files through simultaneous selection of multiple files.
- 3** During manual evaluation of detector signals, numerical values can be set manually or as multiples of half-time.



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