

# TeraLyzer

## THz-TDS Data Evaluation Software for Sub-100 $\mu\text{m}$ and Multilayer Samples

**MenloSystems**

### APPLICATIONS

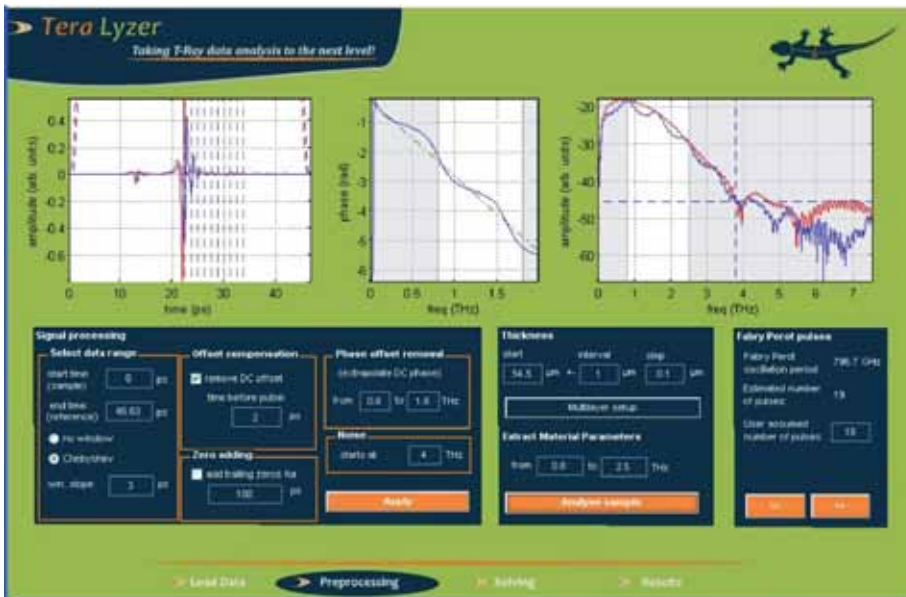
- Time-resolved THz Spectroscopy in Transmission Geometry
- Investigation of Sub-100  $\mu\text{m}$  Samples, up to Several mm Thickness
- Characterization of unknown Layers in a Multilayer System
- Inaccessible Samples, eg. in a Cryostate

### FEATURES

- Broadband Application
- Sample Thickness Extraction
- Optical Parameter Extraction ( $n, \alpha, \kappa, \epsilon'$  and  $\epsilon''$ )
- Statistical Error Propagation
- Data Import and Preprocessing
- Dynamic Range Correction for Highly Absorbing Samples

### OPTIONS

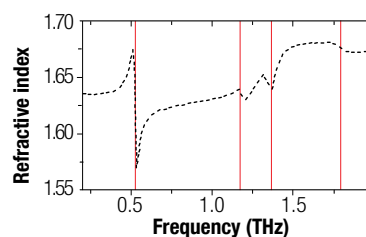
- **SINGLE LICENCE**  
Single Version
- **GROUP LICENCE**  
Up to 10 Workstations
- **TRIAL VERSION**  
Valid for 28 Days



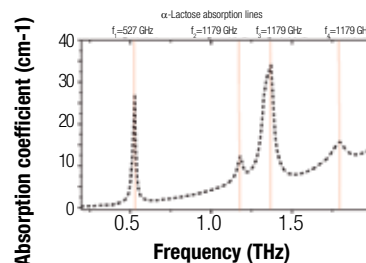
TeraLyzer has been developed by our partners from Lytera. It is a first-of-its-kind software solution for advanced evaluation of THz time-domain spectroscopy data, enabling the investigation of various sub-100  $\mu\text{m}$  and multilayer samples in a standard measuring setup, thus promoting a whole new range of experiments. From transmission THz-TDS data, TeraLyzer extracts the sample thickness and simultaneously delivers information on THz material parameters with high accuracy. Versatile time-domain preprocessing features are included such as data import, flexible windowing, offset removal and phase correction.

### CASE STUDY $\alpha$ -lactose / polypropylene compound

**Refractive index:**



**Absorption spectrum:**



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# TeraLyzer

## THz-TDS Data Evaluation Software

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### SPECIFICATIONS

Measurable Sample Thickness	<100 μm, up to several mm, multilayer empowerment
Multi-step Procedure	data import (transmission measurement) data preprocessing (windowing, offset and phase correction) thickness extraction extraction of $n, \alpha, \kappa, \epsilon'$ and $\epsilon''$ statistical error propagation
Thickness Extraction Algorithms	considering Fabry-Perot reflections (Quasi Space or Total Variation method)

### SETUP REQUIREMENTS

Setup Configuration	Menlo Systems TERA K8*	Menlo Systems TERA K15*
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### SYSTEM REQUIREMENTS

Processor	Intel Pentium 4 or AMD Athlon 64 processor
Systems Software	Microsoft Windows XP
RAM	1 GB
DVD-ROM drive/USB	compatible with dual-layer DVDs
Display	1024x768 display with graphic card
Data import	THz time-domain measurement data (ASCII)
Data export	.csv and .mat
Internet Connection	yes (for license validation)

### ORDERING INFORMATION

Product Code		Price
TeraLyzer	Single License	EUR 3.990
TeraLyzer	Group License	EUR 6.490
TeraLyzer	Trial Version	FREE

Prices and specifications are subject to change without notice. Custom modifications are available, please inquire.

**MenloSystems**

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