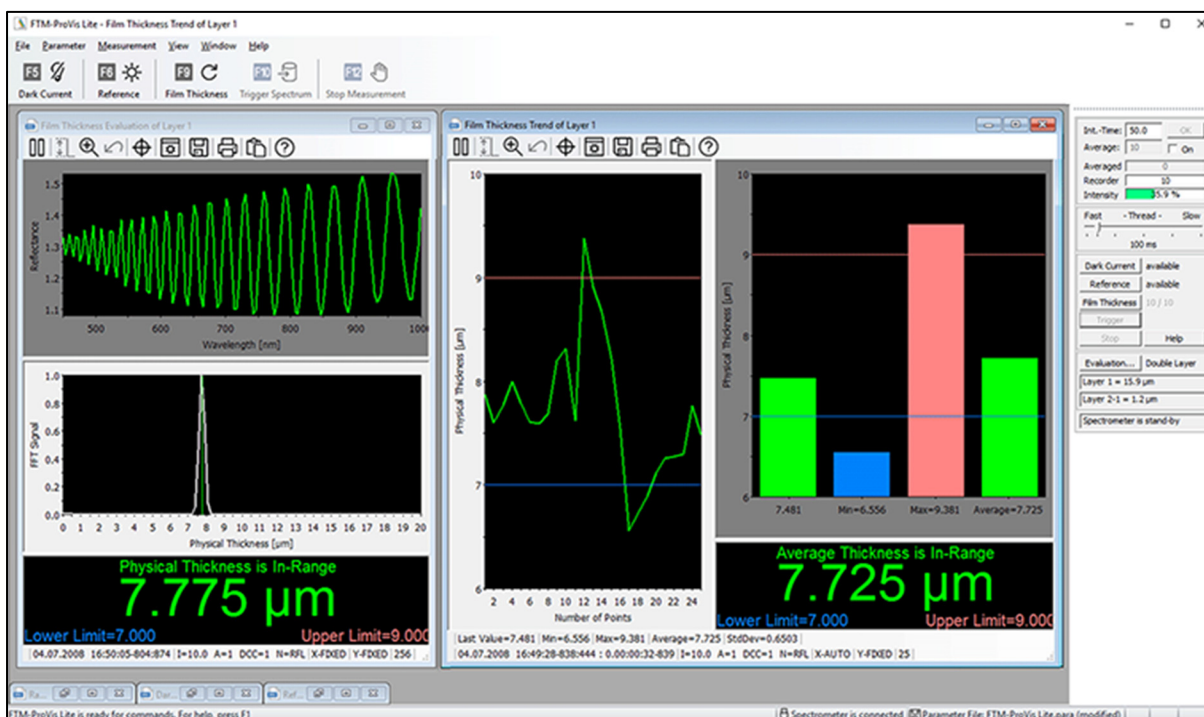


FTM-ProVis Lite

Software for Film Thickness Measurement

FTM-ProVis Lite is a convenient and very easy-to-use software package, which permits to quickly perform high precision film thickness measurements of transparent layers using our **TranSpec Lite** film thickness gauges.

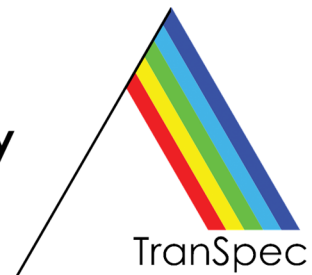


Exemplary screen layout of FTM-ProVis Lite

FTM-ProVis Lite uses an improved Fast-Fourier Transformation (FFT) algorithm to determine the film thickness from measured white-light interference spectra of thin transparent layers, which ensures high-precision results in the entire measurement range. The film thickness result is computed in real-time, can be displayed in various different on-line charts and logged to a text file during the measurement. FTM-ProVis Lite also permits the simultaneous measurement of double-layers.

The example above shows on top left the captured interference spectrum (green curve), from which the FFT spectrum is computed and displayed below (white curve). In the FFT spectrum the position of the so-called FFT peak directly supplies the film thickness result, which then is displayed as number at the bottom or, for example, in a trend chart as shown right beside.

Technical specifications on next page ►



FTM-ProVis Lite Software • Technical Specifications

January 2024, related to version 6.0, without guarantee, subject to changes

Minimum Hardware and Software Requirements

- Standard PC/Laptop with Windows 10 or Windows 11
- Monitor with at least Full-HD, higher resolution is recommended
- One available USB 2.0 / 3.x port
- TranSpec Lite Film Thickness Gauge

General Description

- Multi-Threaded and Multiple Document Interface handling
- Shell registration for drag-and-drop of FTM-ProVis Lite document files
- Minimum requirement of resource and memory
- Coded in Microsoft Visual C++ by use of the Microsoft Foundation Classes (MFC)
- Consideration of the Microsoft Application Design Guide: menu toolbar, status bar, tool tips, on-line help
- Fully supports Windows themes, multi-monitor use and Windows scaling
- Software documentation as detailed color printed manuals and PDF files with many measurement examples
- Runs in English, German or Chinese

Film Thickness Measuring Range

The film thickness range generally measurable with TranSpec Lite is ~0.8 to 120 micrometer (~ 0.03 to 4.8 mil), but depends essentially on the assembled spectrometer module and the currently selected spectral evaluation range, which can be setup in the software individually for each type of layer. Other factors which determine the measurable film thickness range are the refraction index (and its dispersion) of the layers to be measured.

High-Precision and Fast Evaluation Method, also for Double-Layers

- Evaluation of interference spectra with the help of a special Fast-Fourier-Transformation (FFT)
- Run time-optimized algorithm, evaluation time is less than a millisecond
- Special algorithm for highly accurate sub-pixel determination of the FFT peak position (film thickness result)
- Selectable spectral evaluation range of the interference spectrum
- Consideration of refraction index and dispersion (Cauchy Dispersion Correction)
- Selectable film thickness evaluation range in the FFT spectrum for fully automatic measurement of double layers

Various Options for Measurement and Visualization

FTM-ProVis Lite provides various options to perform film thickness measurement tasks and graphical representation of the results. At the same time the software is very user-friendly, so even less trained personnel can work with FTM-ProVis Lite.

- Manually or fully automatic timer triggered film thickness measurements
- Real-time representation of Interference and FFT spectrum during measurement
- Real-time representation of the film thickness results as trend and bar chart
- Logs up to 100,000 thickness results to I/O shared text files, accessible by third-party software during measurement
- Logs up to 100,000 spectra as Spectra-Recorder, which permits a subsequent off-line film thickness re-evaluation
- Saves all your parameter settings into individual parameter files
- Password protection of parameter setups and special user access rights for each document individually
- Quick access to last used Parameter and Spectra-Recorder files

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