MProbe VisHC

Thin Film Measurement System

It is easy to be an expert with MProbe

Semiconsoft,Inc
Measurement Solutions

Measurements of thin films on curved samples that are large, difficult to place on sample holder or to move (e.g. assemblies) require special probes. MP-FLVis manual probe has a soft rubber padding and can be placed directly on the product. It is connected to a measurement unit with fiberoptics cable.

Backside Reflection

MP-FLVis probe is targeted for applications where film is deposited on relatively thin transparent substrate and there is a need to eliminate the backside reflection (e.g there may be coating on the backside).
Examples of such applications are hardcoat on eyeglass lenses, hardcoat or anti-fog coat on head/rear automotive lights (covers and lenses).

Ease of Use

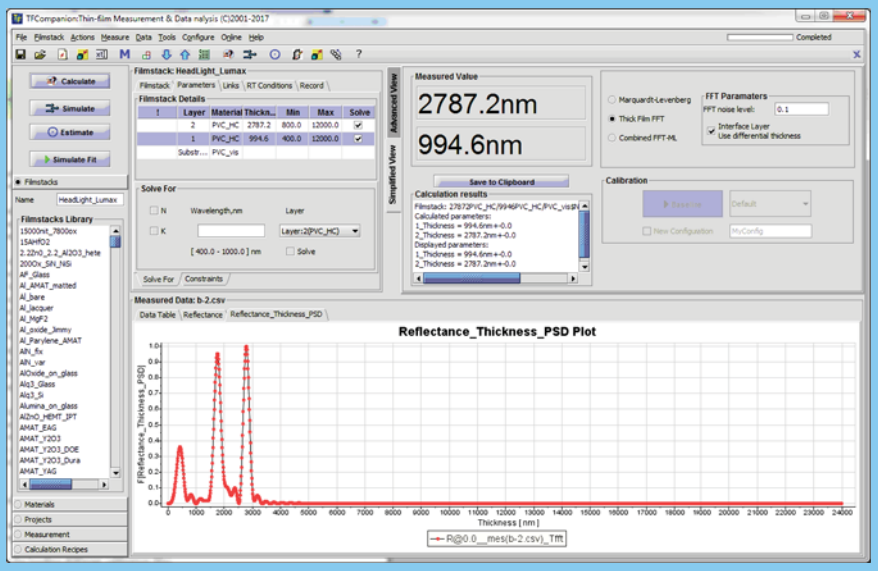
One-click measurement and analysis. Automatic adjustment of integration time. Powerful software tools that correct and optimize measured data.

MProbeHC system

Precision	0.01nm or 0.01%
Accuracy	0.2% or 1 nm
Stability	0.02nm or 0.03%
Spot Size	0.2mm or 0.4mm (depending on fiber)
Sample Size	> 25mm
Thickness range	0.05 -70 μm

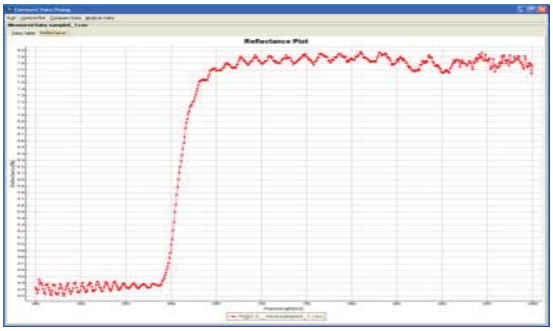
MProbe Advantage

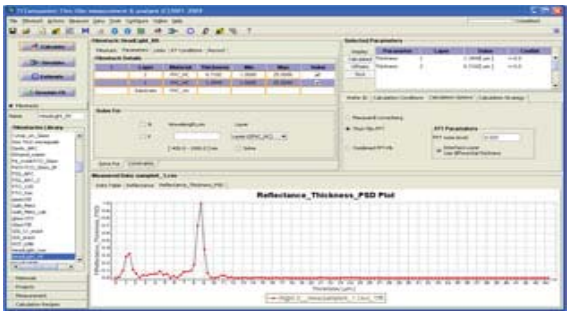
- Standalone software included
- Remote diagnostics
- Dispay residual color
- Measurement history for recall and display (plots and statistics)
- Compare and evaluate multiple reflectance spectra
- Microprocessor controlled light source with 10000+ hours lifetime
- Free software update for 12 months



Hardcoat measurement. HC and IPL (interpenetration layer) thicknesses are determined

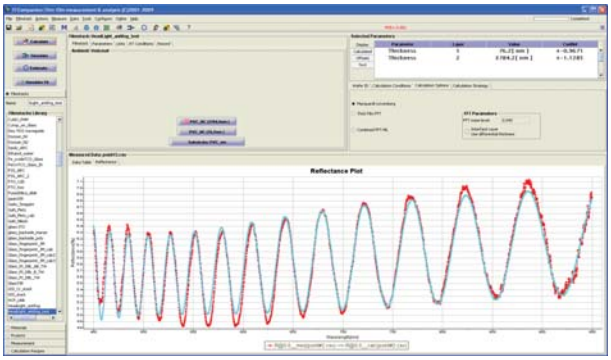
Specification





Measurement of HC on rear-light (red) covers

Spectral range (nm)	400-1000
Spectrometer/detector	F4 spectrometer, 3600 pixels Si CCD, 16 bit ADC, 380-1100 nm range
Spectral resolution	<1 nm FWHM
Light source	5 W Tungsten-halogen lamp (Xe filled), CT 2800° Lifetime: 10000 hrs
Reflectance probe	Fiberoptics (7 fibers assembly), 400µm fiber core
Precision	<0.01 nm or 0.01%
Accuracy	<1nm or 0.2%
Weight (main unit)	5 kg
Size (main unit)	8”x 12” x 4” (WxDxH)
Power	100-250VAC, 50/60 Hz 20W



Measurement of anti-fog coating on lens

Hardware options	
- FO200	Using 200µm fiberoptics probe (for 0.2mm spot size)
- 2oW	Change to 20W (CT 3100°, lifetime 2000hrs) tungsten-halogen lamp.
-AR1	upgrade spectrometer for higher quality photometric measurement.
-AR2	upgrade spectrometer for highest quality photometric measurement.

Photometric specification			
	HC	HC -AR1	HC-AR2
Wavelength accuracy	<0.5 nm	<0.5 nm	<0.5nm
Wavelength Reproducibility	0.1nm	<0.1nm	<0.1nm
Photometric Accuracy	0.01A	<0.005A	<0.001A
Noise	0.001A rms	<0.0005A rms	<0.0001A rms
Stray Light	0.05% at 600nm	<0.05% at 600 nm	<0.01% at 600nm

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(Product designed,manufactured and tested in USA)