MProbe MSP

Microscope Thin Film Measurement System

It is easy to be an expert with MProbe

Majority of translucent or lightly absorbing films can be measured quickly and reliably:Oxides,Nitrides, Photoresists, Polymers, Semiconductors (Si, aSi, polySi), Compound Semiconductors (AlGaAs, InGaAs, CdTe,CIGS),Hard coatings (SiC, DLC), Polymer coatings (Paralene, PMMA, Polyamides), adhesives, thin metal films and many more.

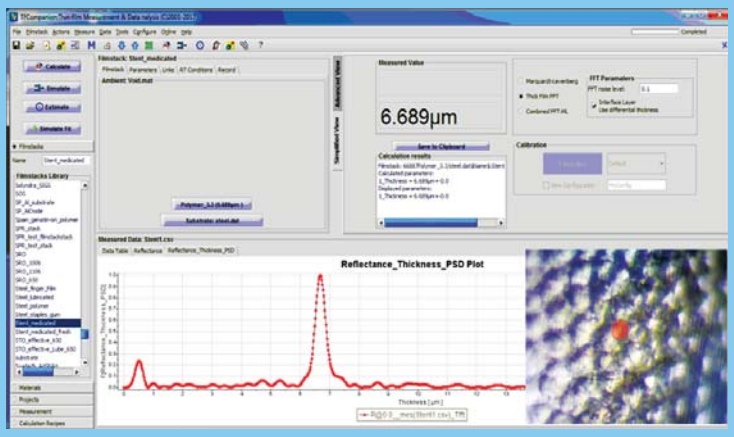
Thickness Range: 1 nm - 1 mm
Wavelength Range: 200nm -1700nm
Spot size: 200μm to 2 μm

Thin -Film solar cells: aSi, TCO, CIGS, CdS, CdTe,perovskytes - full solar stack measurement.
LCD, FPD application: ITO, Cell Gaps, Polyamides.
Optical Coatings: dielectric filters, hardness coating, anti-reflection coating. Semiconductor and dielectics: Oxides, Nitrides, OLED stack.
Biomedical: stents, orthopedic implants coating

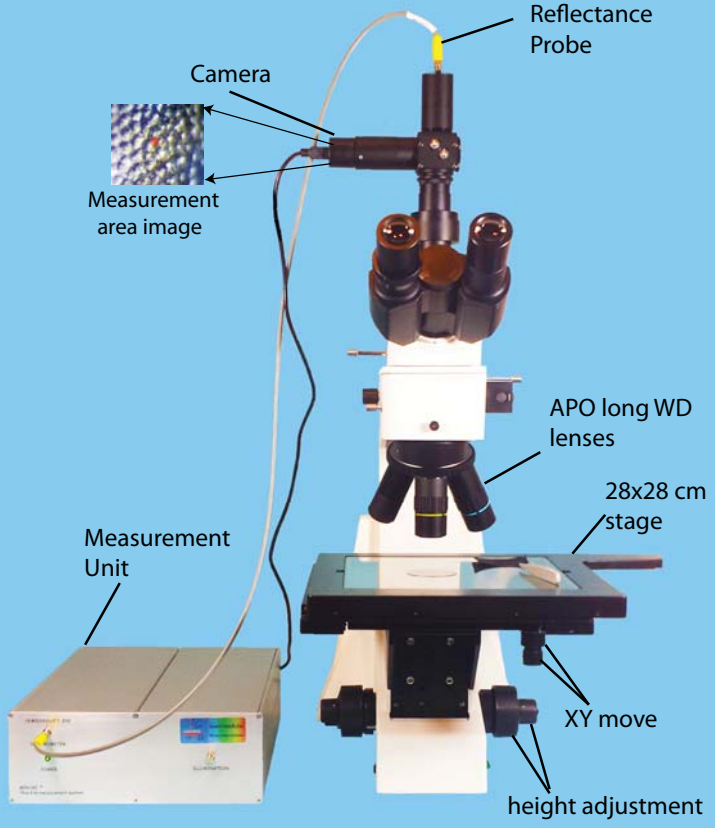
Extensive materials library (500+ materials) - new materials easily added. Support of parameterized materials: Cauchy, Tauc-Lorentz, Cody-Lorentz, EMA
and many more....
Flexible: Easy integration with external softwares.

Measurement parameters: thickness, optical constants, surface roughness. Unlimited number of layers.

User friedly and powerful: One-click measurement and analysis. Powerful tools: simulation & sensitivity, background and scaling correction,linked layers and materials, multisample measurements, dynamic measurement and production batch processing.



Measurement of coating thickness on stent



- 280x280mm (11'x11") sample stage
- Height adjustment up to 30 mm
- Long working distance (WD) lenses (20mm - 35mm)
- Achromatic UV-NIR tube lens

Ease of use and powerful analysis tools
Ready for R&D and production application

Precision	<0.1nm or 0.1%
Accuracy	<0.2% or 1 nm
Stability	<0.2nm or 0.3%
Spot Size	200 μm to 2 μm
Sample Size	from 100 μm to 250mm x 250mm
Objectives	10x,20x,50x (Vis), 8x(UV-NIR). 95 parfocal, long WD objectives

Clean room class 1000 design

Basic Options/ Specification

Option	Description	Comments
-MXY[6 or 8]	Motorized XY stage 6" x6" (150mm) or 8"x8" (200mm). Controller and software support for mapping is included. 0.5 μm step size, +-1 μm repeatability	8"x8" manual stage is included as standard with all models
-TOM	Transmittance measurement configuration. Includes: glass insert for stage, light source/condenser, fiber optics .	for Vis and IR models
-APO100*	APO 100X objective (visible), 95mm parforcal, R=0.7 μm	2x,10x,20x,50x are included as standard

*Other objectives are available. (APO parfocal 95mm objectives for Vis, NIR and UV)

Model	Wavelength range	Spectrometer/Detector/Light source	Thickness range*
VIS-MSP	400-1000 nm	Spectrometer F4/Si 3600 pixels/ Tungsten - Halogen light source	10 nm to 75 μm
UVVisSR-MSP	200-1000 nm	Spectrometer F4/ Si CCD 2048 pixels/ Deuterium & Tungsten-Halogen light source	1 nm to 75 μm
VISHR-MSP	700-1100 nm	HR Spectrometer F4/Si 2048 pixels/ Tungsten - Halogen light source	1 μm to 400 μm
NIR-MSP	900-1700nm	Spectrometer F4/512 InGaAs/Tungsten-Halogen light source	50 nm to 85 μm
VISNIR-MSP	400-1700 nm	Spectrometer F4 Si CCD 3600 pixels(Vis channel);Spectrometer F4/512 InGaAs PDA(NIR channel) Tungsten-Halogen light source	10 nm to 85 μm
UVVISNIR-MSP	200 -1700 nm	Spectrometer F4 Si CCD 2048 pixels(UVVis channel);Spectrometer F4/512 InGaA (NIR channel) Deuterium & Tungsten-Halogen light source	1 nm - 85 μm
VisXT-MSP	800 - 870 nm	HRX Spectrometer F4/2048 pixels/ Tungsten-Halogen light source	10 μm- 1400 μm

* T, n & k measurement in 25nm - 20μm thickness range

Measurement principle: Optical spectroscopic reflectometer (transmittance measurement is available as an option)

Other configuration are available.One year limited warranty on labor and materials for all system.

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