



# 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, Photore-sists, 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**

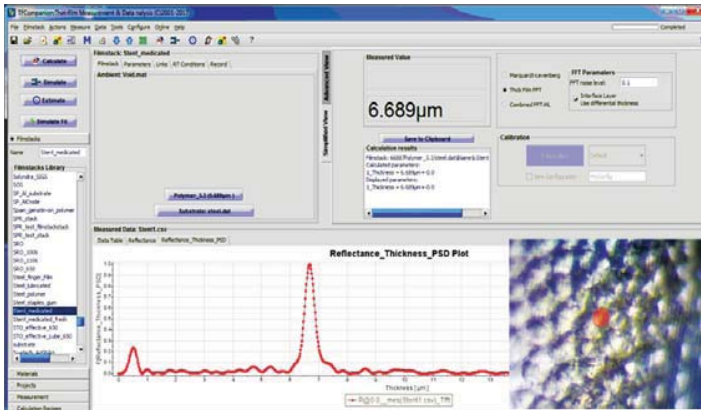
Thin - Film solar cells: aSi, TCO, CIGS, CdS, CdTe, perovskites - full solar stack measurement.  
 LCD, FPD application: ITO, Cell Gaps, Polyamides.  
 Optical Coatings: dielectric filters, hardness coating, anti-reflection coating. Semiconductor and dielectrics: Oxides, Nitrides, OLED stack.  
 Biomedical: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

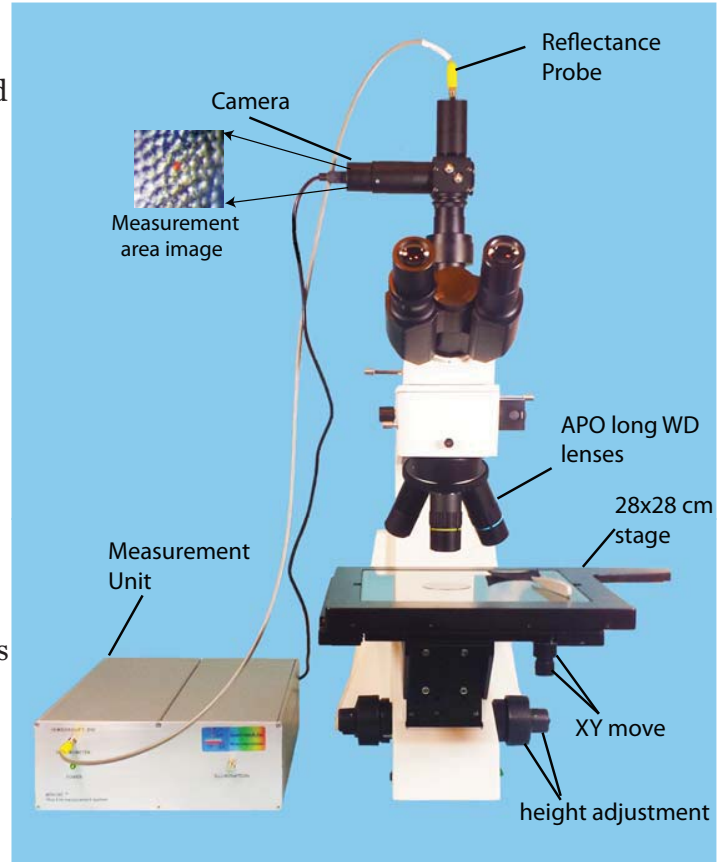
**Flexible:** Easy integration with external softwares.

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

**User friendly 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

Option	Description	Comments
<b>-MXY[6 or 8]</b>	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
<b>-TOM</b>	Transmittance measurement configuration. Includes: glass insert for stage, light source/condenser, fiber optics .	for Vis and IR models
<b>-APO100*</b>	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*
<b>VIS-MSP</b>	400-1000 nm	Spectrometer F4/Si 3600 pixels/ Tungsten - Halogen light source	10 nm to 75 µm
<b>UVVisSR-MSP</b>	200-1000 nm	Spectrometer F4/ Si CCD 2048 pixels/ Deuterium & Tungsten-Halogen light source	1 nm to 75 µm
<b>VISHR-MSP</b>	700-1100 nm	HR Spectrometer F4/Si 2048 pixels/ Tungsten - Halogen light source	1 µm to 400 µm
<b>NIR-MSP</b>	900-1700nm	Spectrometer F4/512 InGaAs/Tungsten-Halogen light source	50 nm to 85 µm
<b>VISNIR-MSP</b>	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
<b>UVVISNIR-MSP</b>	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
<b>VisXT-MSP</b>	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.

Distribution in the UK & Ireland



**Characterisation,  
Measurement &  
Analysis**

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