MProbe Thin Film Measurement Systems

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), thin metal films and many more.

Thickness Range: 1 nm - 1 mm
Wavelength Range: 200nm -1700nm
Spot size: 2mm to 0.5 mm

Thin Solar Cells applications: aSi, TCO, CIGS, CdS, CdTe - 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

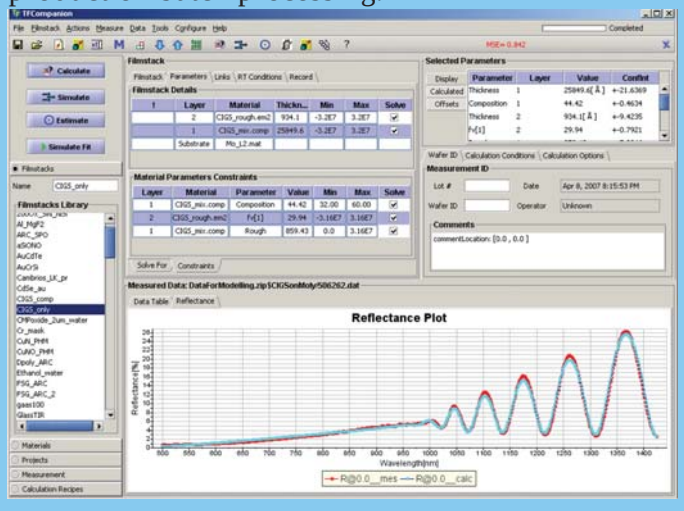
Real time measurement and analysis. Multi-layer, thin,thick, freestanding and nonuniform layers.

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

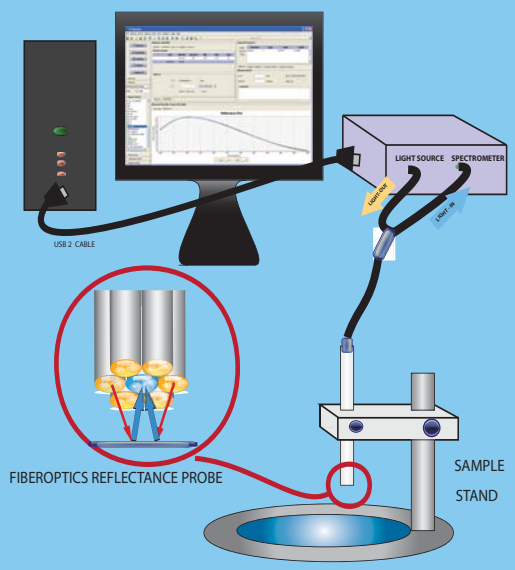
Flexible: Desktop or in-situ, R&D on inline. Easy integration with external system using TCP or Modbus interface

Measurement: thickness, optical constants, surface roughness

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.



CdS/CIGS stack results it measured vs. generated data

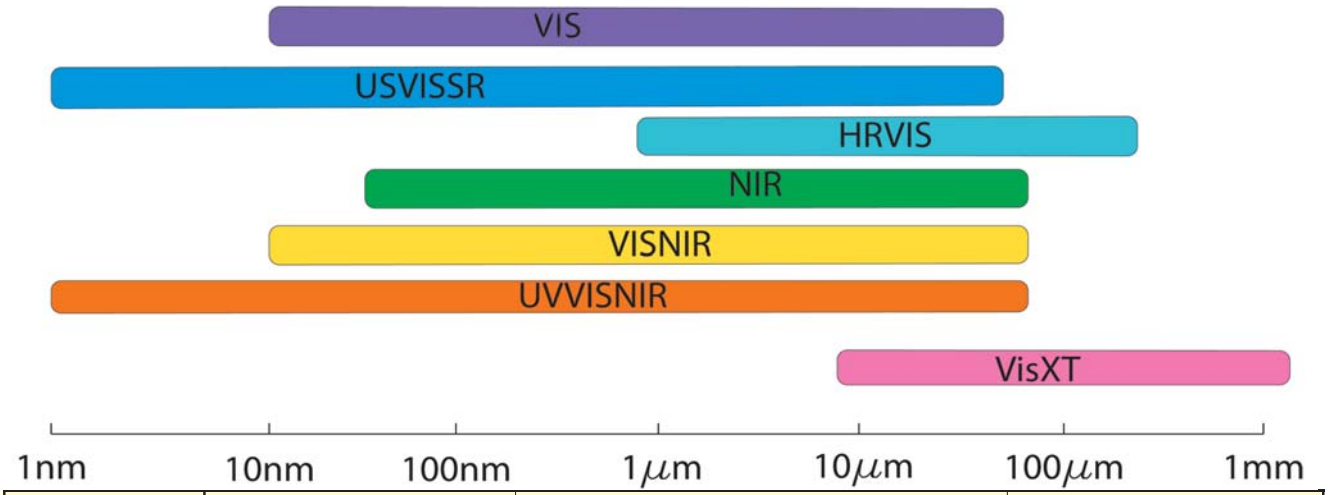


MProbe system diagram

Precision	<0.01nm or 0.01%
Accuracy	<0.2% or 1 nm
Stability	<0.02nm or 0.03%
Spot Size	2 mm standard, 0.5 mm with lens
Sample Size	from 5 mm

MProbe system (desktop configuration)

Standard Configurations/Basic Specification



Model	Wavelength range	Spectrometer/Detector/Light source	Thickness range*
VIS	400-1100 nm	Spectrometer F4/Si 3600 pixels/ Tungsten - Halogen light source	10 nm to 75 μm (option:up to 150 μm)
UVVisSR	200-1000 nm	Spectrometer F4/ Si CCD 3600 pixels/ Deuterium & Tungsten-Halogen light source	1 nm to 75 μm (option:up to 150 μm)
VISHR	700-1100 nm	HR Spectrometer F4/Si 2048 pixels/ Tungsten - Halogen light source	1 μm to 400 μm
NIR	900-1700nm	NIR F4/512 InGaAs PDA/Tungsten-Halogen light source	50 nm-300 μm
VISNIR	400-1700 nm	Spectrometer F4 Si CCD 3600 pixels(Vis channel);NIR F4/512 InGaAs PDA(NIR channel) Tungsten-Halogen light source	10 nm to 300 μm
UVVIS-NIR	200 -1700 nm	Spectrometer F4 Si CCD 2048 pixels(UVVis channel);NIR F4/512 InGaAs PDA(NIR channel) Deuterium & Tungsten-Halogen light source	1 nm -300 μm
VisXT	800-870 nm	F4/Si 2048 pixels, Tungsten Halogen light source	10 μm- 1400 μm

* T, n & k measurement in 25nm - 5μm thickness range.
Maximum thickness limits are listed for R.I.= 1.5
Other configuration are available. OEM inquiries and custom development projects are welcome.
One year limited warranty on labor and materials for all systems.

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