



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 -5000nm

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 dielectrics: Oxides, Nitrides, OLED stack

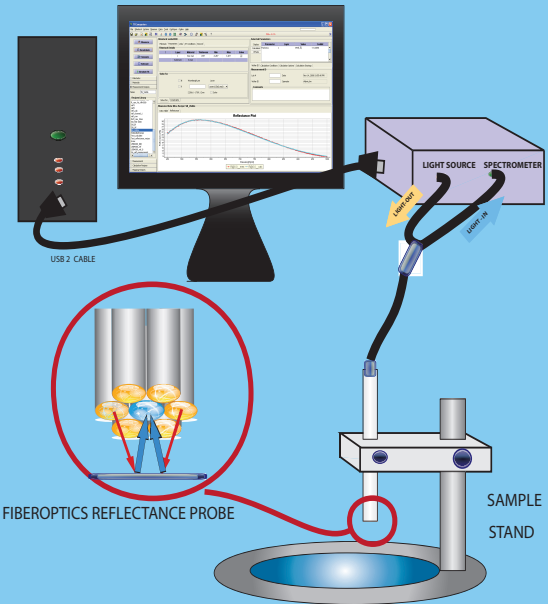
Real time measurement and analysis. Multi-layer, thin, thick, freestanding and nonuniform layers.

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

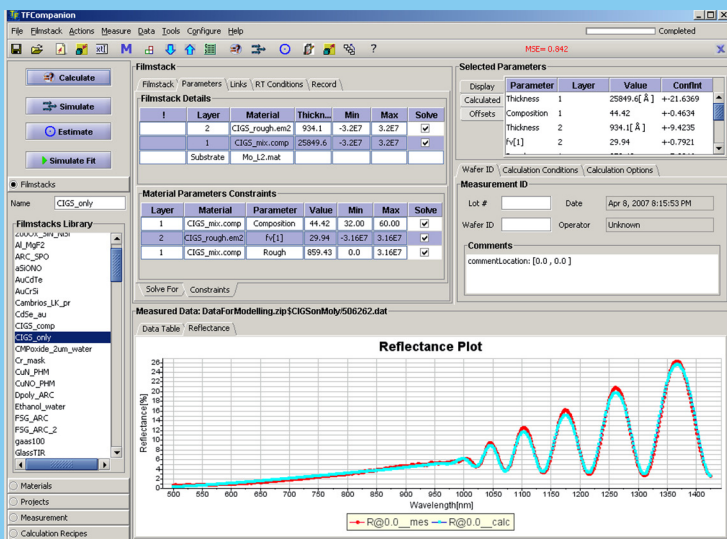
Measurement: thickness, optical constants, surface roughness

User 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.

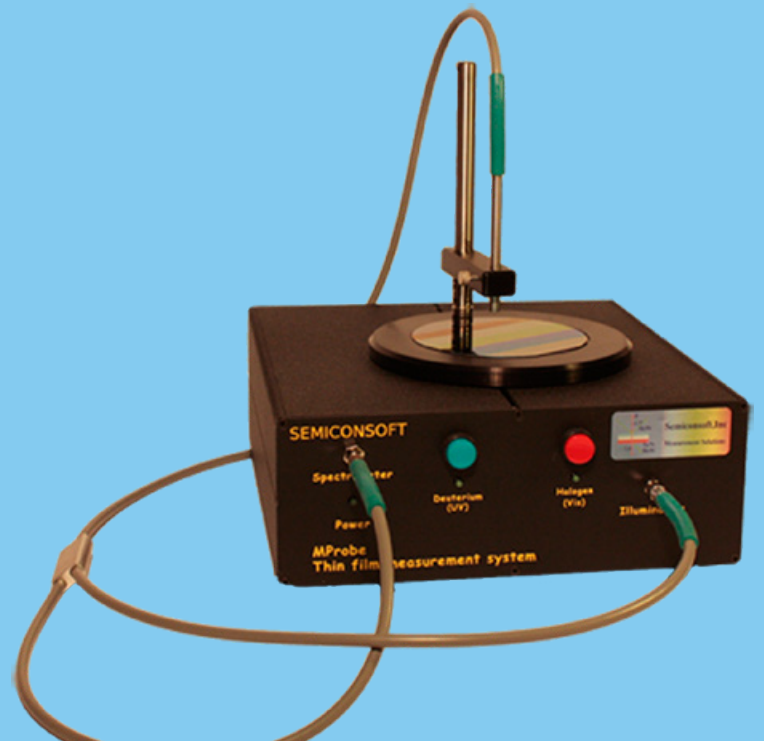


MProbe system diagram

Precision	0.01nm or 0.01%
Accuracy	0.2% or 1 nm
Stability	0.02nm or 0.03%
Spot Size	3 mm standard, down to 3 μm
Sample Size	from 1 mm

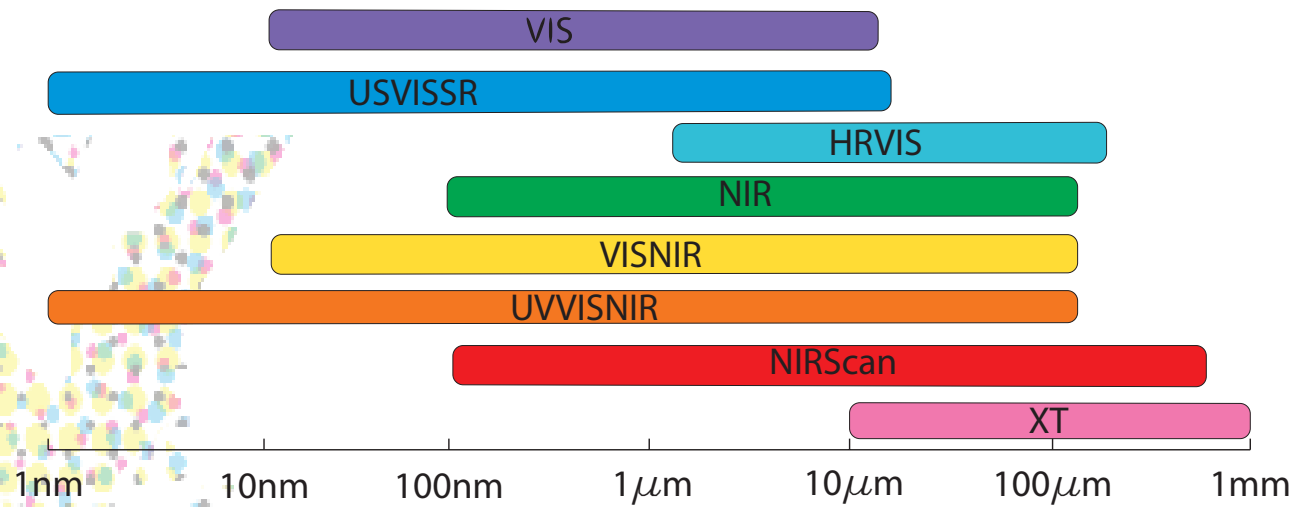


CdS/CIGS stack results
Fit measured vs. generated data



MProbe system (desktop configuration)

Basic Specification



Model	Wavelength range	Spectrometer/Detector/Light source	Thickness range*
VIS	400-1100 nm	Spectrometer F4/Si 3600 pixels/ Tungsten - Halogen light source	15 nm to 20 μm (option:up to 50 μm)
UVVisSR	200-1100 nm	Spectrometer F4/ Si CCD 3600 pixels/ Deuterium & Tungsten-Hal- ogen light source	3 nm to 20 μm (option:up to 50 μm)
HRVIS	700-1000 nm	HR Spectrometer F4/Si 3600 pix- els/ Tungsten - Halogen light source	1 μm to 400 μm
NIR	900-1700nm	Transmission Spectrometer (TVG) F2/512 InGaAs/Tungsten-Halogen light source	100 nm-200 μm
VISNIR	400-1700 nm	Spectrometer F4 Si CCD 3600 pixels(Vis channel);Transmission Spectrometer (TVG)F2/512 InGaAs PDA(NIR channel) Tungsten-Halogen light source	15 nm to 200 μm
UVVIS- NIR	200 -1700 nm	Spectrometer F4 Si CCD 3600 pixels(Vis channel);Transmission (TVG) F2/512 InGaA (NIR channel) Deuterium & Tungsten-Halogen light source	3 nm -200 μm
NIRScan	900nm -5000nm	Scanning spectrometer/InGaAs/ MCT detectors (scan time <60 sec) TH-SiN light source	100 nm -800 μm
XT	1590nm -1650nm	Transmission Spectrometer (TVG) F2/512 InGaAs/Tungsten-Halogen light source	10 μm - 1 mm

* T, n & k measurement in 25nm - 5 μm thickness range

Other configuration are available. OEM inquiries and custom development projects are welcome.

One year limited warranty on labor and materials for all system.

Semiconsoft, Inc, 2010

tel. +1.617.388.6832 email: info@semiconsoft.com fax.+1.508.858.5473

Visit us : <http://www.semiconsoft.com>