

MProbe UVVis/NIR-RT

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: optical coatings, Oxides,Nitrides, Photoresists, Polymers, Semiconductors (Si, aSi, polySi), Hard coatings (SiC, DLC), Polymer coatings (Paralene, PMMA, Polyamides), thin metal films and many more. **Thickness Range:**

1 nm - 20 μm (UVVIS) to 150 μm(UVVISNIR) Wavelength Range: 200nm -1000 nm (UVVIS) to 1700nm(UVVISNIR)

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....

Measurement: thickness, optical constants, surface roughness . Reflectance and trasnmittance spectra 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.



Reflectance and transmittance measurement 1025nm oxide on sapphire slide (200-1700nm wavelength range)



MProbe system diagram

Precision	0.1nm or 0.01%
Accuracy	0.2% or 1 nm
Stability	0.05nm or 0.03%
Spot Size	2 mm standard (to 2 μ m with MSP)
Sample Size	from 1 mm



MProbe RT system (desktop configuration)

Specification



Spectral range (nm)	200-1000 nm UVVIS 200-1700 nm UVVISNIR
Raw measured data	Reflectance/Transmittance spectra
Measured parameters	Thickness, n.k, surface roughness
Spectrometer/detector	F4 spectrometer, Si CCD, 16 bit ADC 200-1100 nm range (UVVis) F3 NIR spectrometer, 512 pixels InGaAs PDA.
Spectral resolution	<2 nm (UVVis) <4nm (NIR)
Light source	20W Tungsten-halogen lamp (Xe filled), CT 3100° Lifetime: 2000 hr 30W De Lamp Lifetime: 2000 hr
Reflectance probe	Fiberoptics (7 fibers as- sembly), 400 μ m fiber core
Precision	<0.1 nm or 0.01%
Accuracy	<1 nm or 0.2%
Weight (main unit)	6 kg (UVVIS) 14 kg (UVVISNIR)
Size (main unit)	8"x 12" x 4" (UVVIS) 8" x 18"x 4" (UVVISNIR)
Power	100-250VAC, 50/60 Hz 20W

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