

Thin Film Measurement System **MFS-630-F**



Applications:

SEMICONDUCTOR:

SiO₂, NO_x, ITO, photoresist, polysilicon, polyamide, Nb₂O₅, etc.

LCD PANEL:

Polyamide, ITO, Cell Gap

PLED AND OLED:

OPTICAL COATINGS:

Hardness Coatings
Anti-Reflection Coatings, Filters
IR Coatings on architectural and automotive glass

The **MFS-630-F** system comes standard with a miniature TE cooled CCD spectrometer, integrated fiber optic module, reflection probe, manual X,Y stage, light source, lens assemblies and FilmSmart software. The MFS-630 can measure thickness, refractive index, extinction coefficient, and transmittance and reflectance quickly and easily. Spectral analysis of reflections from the top and bottom interfaces of the thin-film provides thickness and optical constants (n and k) in seconds. The entire desktop system sets up in minutes and can be used by anyone with basic computer skills. Options include UV and NIR capability as well as a computer controlled X-Y stage.

System Components:

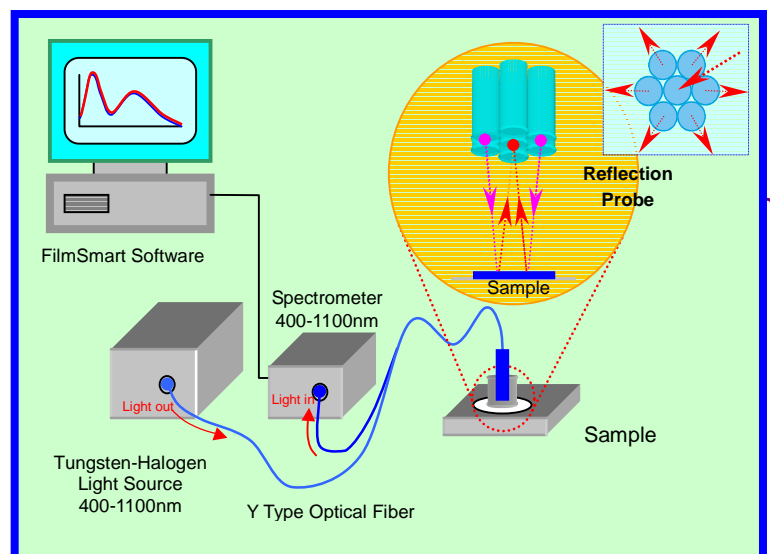
TE Cooled CCD spectrometer

Multi-axis integrated reflective optic fiber module

Light source (UV-VIS or UV-VIS-NIR)

Sample stage (basic, multi-functional, or automatic)

WinXP compatible FilmSmart analysis software

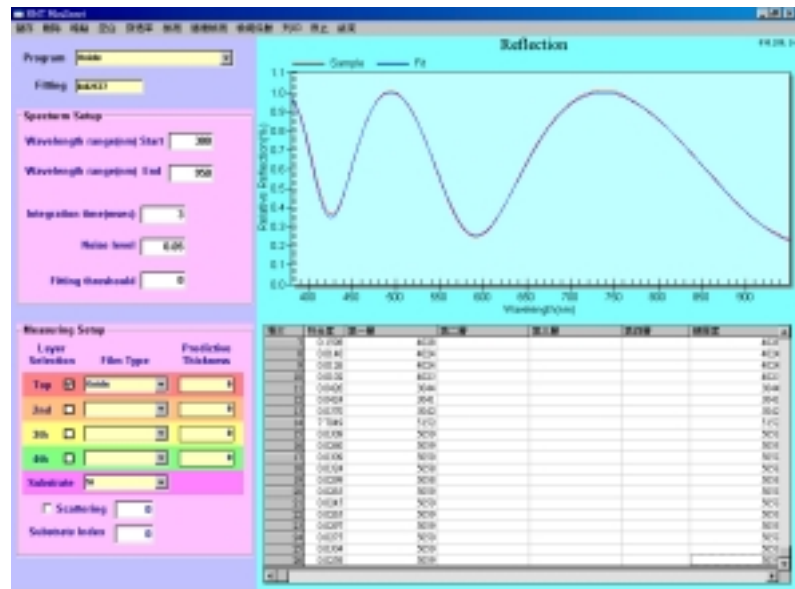


Software

HMTOptic transmittance-reflectance analysis.

Chromatic aberration analysis

Film thickness measurement



Instrument Specifications

Wavelength Range	200 nm to 850 nm (standard)
Spectrum Resolution	1 nm
Analyzing Time	5 seconds
Measuring Point	0.3 cm approximate
Accuracy	0.1 nm
Detector	Dual channel detector: 2048 element CCD array Slit: 5, 10, 25, 50, 100, 200 μ m selectable S/N ratio: 250/1
Sample Stage	Basic (standard) Tilt angle adjustable (option) XY automatic positioning (option)
Light Source	Tungsten lamp: 380-1050 nm (standard) Tungsten and D2 lamp: 200-1100 nm (option) D2 lamp: 200-400 nm (UV only, option)
Optic Fiber and Integral Module	Y type optic fiber: 400 μ m internal diameter, 7 lines, one for acquisition, 6 for excited light source Single optic fiber: 200 μ m internal diameter
User Interface	PC or Laptop
Data Transfer Interface	Dual USB Ports
Number of Layers	4 Layers Max
Thickness Range	200-40000 \AA