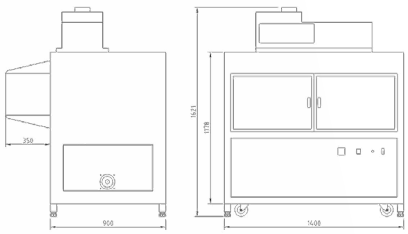
Magneto Optic Ellipsometry



Model No: HO-A216MOE-PH

Holmarc has introduced a new innovative high sensitivity and high magnetic field Spectroscopic ellipsometric measuring equipment utilizing the VIS-NIR wavelengths. HOLMARC A216 test station provides standardized testing solution to fit wide ranging optical rotation measurement applications. The modular hardware design allows user to take automatic liquid, solid and thin film sample measurements under magnetic and no magnetic field. Designed for magneto optic material research and testing including magnetic characterizations of ferromagnetic and ferrimagnetic films and materials. Measurement include magnetic hysteresis loops of ultrathin magnetic films and multilayers, Ellipticity measurements, Thin film thickness measurement of dielectric materials, Refractive index, Delta and psi measurements etc. System can be operated in Polar, Longitudinal and Transverse configurations. Instrument is designed for measurement in the wavelength range of 380nm to 845nm using a high sensitive photo multiplier tube made by hamamatsu. It is an extremely flexible test station based on HARS. Any magnetic thin film, crystal or solutions having magnetic field dependancy can be measured. It can be used to measure magnetic properties of magnetic thin films and nano-magnet arrays. Thin film thickness measurements under uniform magnetic field applied to the sample provides user to characterize each class of materials.

Features

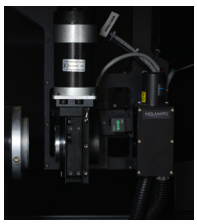
- 350 - 900 nm Measurement Range
- 0.005 Degree Optical Rotation Resolution
- Fully automatic control
- Magnetic field detecting & feedback facility
- MOKE Measurements
- Ellipsometric Measurements

Specifications

Light source	Spectra Halogen, Deuterium / Halogen or Xenon Arc Lamp
Monochromator	Quasar 300F Czerny-Turner Type
Wavelength Range	350 - 900 nm
Collimating & Focusing mirror	50 mm dia, 300 F
Optical Grating	1200 l / mm
Spectral dispersion	2.6 nm / mm
Absolute Diffraction Efficiency	45 - 65 %
Slit Width	0 ~ 3 mm Continuously Adjustable
Resolution	0.1 nm
Wavelength Accuracy	0.2 nm
Wavelength Repeatability	0.1 nm
Stray Light	10-3
Reciprocal of Linear Dispersion	2.7 mm
Half-Width of Spectral line	0.2 nm @ 586 nm
Polarization analysis method	Rotation analyzing method
ARMS	Stepper Motor Controlled Auto Positioning
Spot Diameter	1 - 5 mm
Thin film Holder Sample size	
	1 - 12 mm
	Custom Holders can be provided on request)
Cuvette	10 mm Path length Quartz Cuvette
Sample chamber option	High / low temperature sample holder
Sample Feeding Unit	Stepper Motor Controlled Auto Positioning System
Electro Magnet Unit	PC Controlled Constant current operation
Cooling	Water cooled

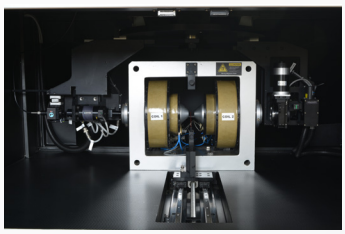
Polarization analysis

Rotation method



Magnetic Field

Max. magnetic field	1.75 Tesla @ 12mm pole gap
Min. Field Detection	1 Gauss
Magnetic field preciseness	± 0.05 %
Field detection	Hall probe based (PC based field measurement)
Feed back of magnetic field	Hall element
Chiller	5 ~ 25°C Chilled water (for cooling electr
Volume	2 L / min.
Power supply for Electro Magnet	Bi-Polar type (Max. ± 90 V/5A
Power supply for Electro Magnet	2.5 kVA AC 220V 50Hz
Control unit	1 kVA AC 220V 50Hz
Software	Spectra ORMS software



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