

“NEOARK” UV Spectrum Magnetic Property Evaluating Equipment
(Evaluation of property in UV wavelength range, and Low Temperature range)
Model BH-M800UV-KC-KF



Summary:

This is Magneto-Optics Effect Evaluating Equipment to measure spectrum property for new materials in the temperature range from low temperature (100K) to high temperature (350C. deg.), and in UV to visible wavelength band. It is the universal Optical evaluating equipment based on magneto-optics effect, which is designed to measure magneto-optics Kerr effect such as Kerr rotation angle, spectral and hysteresis evaluation of ellipticity, expansion in measuring wavelength range and absorption spectral measurement on photoelectric field, as well as Faraday effect.

Construction:

Main body of Spectrum (from UV to visible wavelength band) magneto-optics evaluation (measurement) for materials

Specification:

1) Measuring unit main body

(1) Light source

Xe lamp or mercury lamp

(2) Spectroscope

* Wavelength range: 250nm to 900nm

* No. of ruled grating: more than 1200L/mm

* Wavelength stepping pitch: less than 1nm step

(3) Polarization optical unit

* Polarizer, analyzer: Rochon prism

* Photoelectric conversion element: photoelectric intensifier

* PEM (Photo elastic modulator) shall be applied.

(4) Sample holder for room temperature

Sample size: 3mm to 20mm in square, less than 2mm in thickness

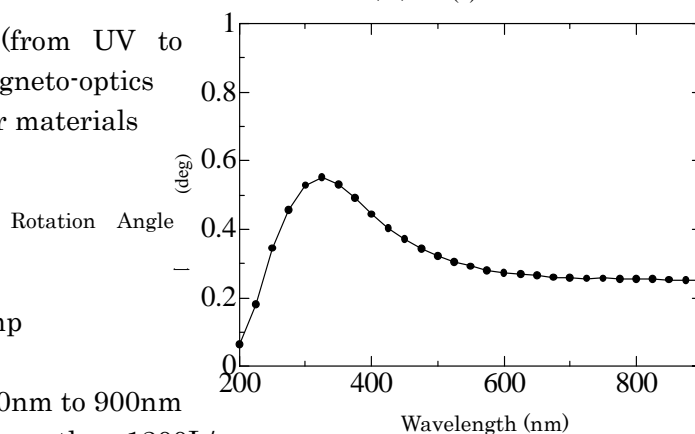
(5) Electromagnet

Max. oscillating magnetic field:

* over 2T (as standard)

* over 1.4T (for high temperature sample holder)

Pt (10) /Co(5) Measuring Data



- * over 1.2T (for the usage of liquid nitrogen type cryostat)
- * over 0.7T (magnetic poles gap 40mm, and for the usage of liquid He type cryostat)

Water cooling method

Automatic demagnetization operation function

(6) Flat table for optics

Main body of measuring unit and optical unit is placed on a flat table.

Control unit is placed under the flat table.

2) Control Unit

(1) Lamp light source

(2) Control unit for spectroscope: for wavelength tuning, selection of grating, selection of filter (lamp selection) etc.

(3) Lock-in amplifier for magneto-optics signal amplification

(4) Magnetic field detection unit: hall element

(5) PEM controller

(6) Interface

(7) Other auxiliary control units

3) Sample Temperature Control Unit

(1) Cryostat for low temperature: room temperature to 100K or less

(2) Temperature control unit for low temperature Cryostat

* Temperature setting range: room temperature to 100K or less

* Temperature setting accuracy: less than +/- 1 C. deg.

* PID method

(3) Sample holder for high temperature

* Temperature setting range: room temperature to 350 C. deg.

* Temperature setting accuracy: less than +/- 1 C. deg.

* PID method

4) Computer

Desk top type personal computer (for control unit)

5) Measuring and analyzing software

(1) Measuring software

For Kerr rotation angle, Kerr ellipticity, Faraday rotation angle, Faraday ellipticity

(2) Analyzing software

* Software to convert ellipticity (rotation angle) to rotation angle (ellipticity) through Kramers-Kronig relations.

* Data input and output is possible in ASCII form.

Remarks:

Specification and outer view may be changed without any previous notice.



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