MURAKAMI COLOR RESEARCH LABORATORY
3-11-3 Kachidoki, Chuo-Ku, Tokyo, 104-0054 Japan
TEL: +81-3-3532-3011 FAX: +81-3-3532-2056

GONIO-SPECTROPHOTOMETRIC COLOR MEASUREMENT SYSTEM

GCMS-3B

Instrument alone:

GSP-1B Gonio-spectrophotometer (customer provides computer)

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GCMS-4

Instrument alone:

GSP-2 Gonio-spectrophotometer (customer supplied computer)

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GCMS-3B & GCMS-4

The gonio-spectrophotometric color measurement system is designed to measure the gonio-apparent materials such as pearl-mica coating surfaces and interference pigments. Those materials change color appearance depending on the viewing and illumination angles. For such types of materials, this gonio-spectrophotometric color measurement system can measure its color by measuring the spatial distribution of reflected (or transmitted) light at user-selectable angles of illumination and detection.

Applications

- Pearl-mica and metallic paints
- Anodized and metallized coatings and inks
- Hair treatments – colorants and conditioners
- Coated Glass
- Plastics
- Retro-reflective, coated and pearl-effect textiles
- Cosmetics
- Liquid-crystal display

Specifications:

	GCMS-4 INSTRUMENT ALONE:GSP-2	GCMS-3B INSTRUMENT ALONE:GSP-1B
Measuring System	Dual-Beam Optics with Reference Plate	Dual-Beam Optics with Reference Plate
Measuring Geometry	Adjustable illumination and viewing angles	Adjustable illumination and viewing angles
Dispersing element	Concave Diffraction Grating	Concave Diffraction Grating
Detector	Silicon Photodiode Array	Silicon Photodiode Array
Wavelength Range	390 – 730 nm	390 – 730 nm
Wavelength Interval	10 nm	10 nm
Spectral Bandpass	approx. 10 nm	approx. 10 nm
Wavelength Accuracy	± 1 nm @ 560nm	± 1 nm @ 560nm

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Wavelength Repeatability	± 0.1 nm	± 0.1 nm
Light Source	Halogen Lamp 12V/100W	Halogen Lamp 12V/100W
Incident Angle Range	-81° to +81° **	-80° to +80° **
Receiving Angle Range	-81° to + 81° ** ** lamp housing obstructs receptor when difference between incident angle and receiving angles ≦8°	-80° to +80°** **lamp housing obstructs receptor when difference between incident angle and receiving angles≦12°
Flapping angle	-76° to + 76°	
Angular Accuracy	Within ±0.5%	Within ±0.5%
Angular Resolution	0.1° (resolution of absolute encoder)	0.1° (resolution of absolute encoder)
Viewed Area	approx. 8 x 16 mm at 0° receiving angle approx. 8 x106 mm at 81° receiving angle (both with flapping angle = 0°)	approx. 8 x 16 mm at 0° receiving angle approx. 8 x 94 mm at 80° receiving angle (both with flapping angle = 0°)
Measurement Accuracy	within ± 0.5%	within ± 0.5%
Repeatability	0.06% SD (white tile measured 45°/0° at 560 nm)	0.05% SD (white tile measured 45°/0° at 560 nm)
	GCMS-4 INSTRUMENT ALONE:GSP-2	GCMS-3B INSTRUMENT ALONE:GSP-1B
Dimensions (mm)	L 1141×W760×H966 mm	L 972×W 566×H922 mm
Power Requirements	100V AC, 50/60Hz	100V AC, 50/60Hz

Installation and training at site is included in price of purchase.

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