KONICA MINOLTA

NEW Spectrophotometer

CM-36dG
CM-36dGV
CM-36d

Advanced functions for today's needs

Data consistency with past models

The Standard in Measuring Color & Light

Giving Shape to Ideas

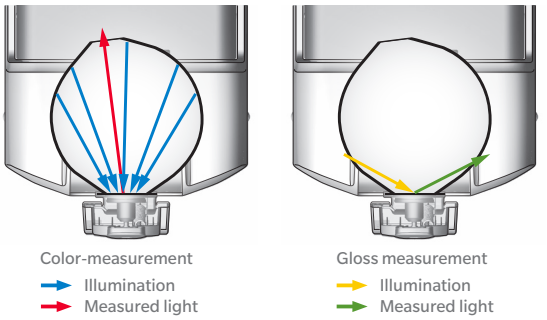
NEW Spectrophotometer

CM-36dG | CM-36dGV | CM-36d

Three models to choose from:
CM-36dG: Horizontal format model offering simultaneous color and gloss measurements, UV adjustment function.
CM-36dGV: Vertical format model with same functions as CM-36dG for textile or paper measurements.
CM-36d: Basic model for spectral reflectance color measurements.

■ Two-in-one instruments for simultaneous color and gloss measurements

The CM-36dG and CM-36dGV are two-in-one spectrophotometers that can measure both color and gloss simultaneously. Simultaneous measurement of color and gloss increases work efficiency and can be used for advanced quality control or color-matching calculations.

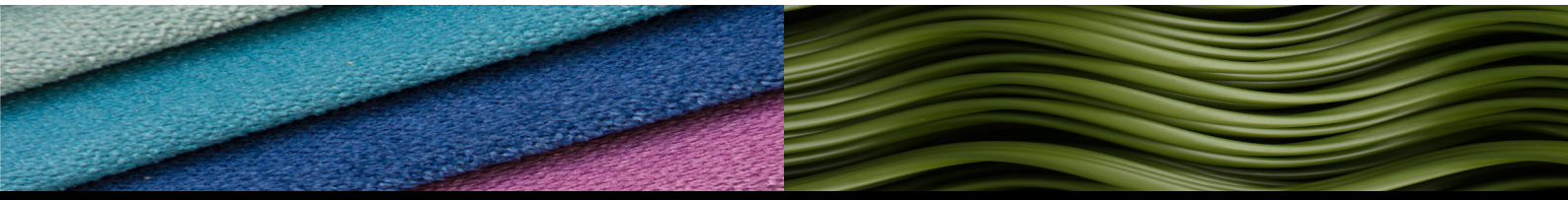


■ Wavelength Analysis & Adjustment for high stability (Option*)

WAA (Wavelength Analysis & Adjustment; available with license purchase) provides worry-free, higher-reliability measurements and minimizes system problems by suppressing shifts in measurement values due to sudden temperature changes, etc. The data required for performing analysis and adjustment are obtained during white calibration, so no extra work is necessary.
* Option; License required. Please contact your local Konica Minolta distributor for more information.

■ High inter-instrument agreement and data consistency with previous models

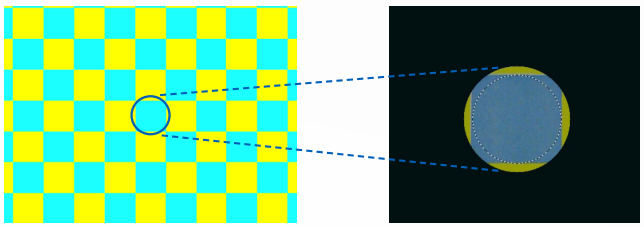
The CM-36dG and CM-36dGV offer high inter-instrument agreement to allow higher work efficiency when using multiple units or units at multiple locations. Colorimetric inter-instrument agreement is within ΔE*ab 0.12 (LAV/SCI), a 20% improvement compared to previous models, and gloss inter-instrument agreement is also the same or better than the performance of gloss-only instruments.
Inter-model agreement with the previous CM-3600A Series is also high, so the same target data can continue to be used, reducing the work required for switching to the CM-36dG Series (for SCI measurements).



Contributes to digital quality control in the supply chain by providing high-precision simultaneous measurements of color and gloss.

■ High usability for improved productivity

✓ Status panel displays measurement status and condition settings to reduce operator mistakes.
✓ Measurements can be performed using the measuring button on the instrument, improving operability when taking a series of measurements.

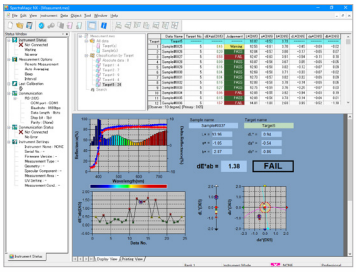


Measurement subject　　Sample viewer image

✓ Sample viewer function* allows software to show the view from inside the instrument, making sample positioning easier.
* SpectraMagic NX or other software required.

■ Color Data Software SpectraMagic NX

SpectraMagic NX is color management software that gives users a plethora of functions for viewing data and for operating and configuring their spectrophotometers from a computer. Users can customise templates and reports by arranging and editing spectral graphs, color difference graphs (2D, 3D), PASS/FAIL indications and other objects to suit their needs.

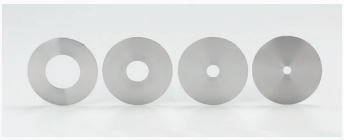


SpectraMagic NX Ver. 3.2 or later ●OS : Windows® 8.1 Pro 32 bit, 64 bit / Windows® 10 Pro 32 bit, 64 bit
* The computer must be running one of the above OS and meet or exceed the below specifications. ●CPU: Pentium® III 600 MHz equivalent or faster ●Memory:128 MB or more (256 MB or more recommended) ●Hard disk: 450 MB or more of free space for installation ●Display: Resolution: 1,024 x 768 pixels or more/ 16-bit colors or more ●Other: DVD-ROM drive (for software installation), USB port (for entering the protection key), USB or serial port (for connecting to spectrophotometers) and Internet Explorer Ver. 5.01 or later installed

Usability

■ Handles a wide variety of measurement subjects

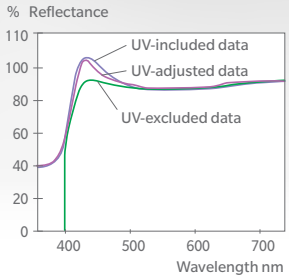
- ✓ Target masks for 4 measurement areas can be selected according to the sample size.
- ✓ Transmittance chamber opens widely to allow measurement of even large samples. Sheets, etc. can be set in position from the side without having to cut them.



LAV LMAV MAV SAV

■ UV adjustment for accurate measurements of fluorescent materials

Accurate measurement of materials such as paper or cloth treated with fluorescent whitening agents (FWA) requires precise control of the UV component and its effects. The Numerical UV Control method used by the CM-36dG and CM-36dGV provides such control by combining results from flashes of two xenon lamps (one with full UV energy, the other with UV energy removed by a 400 nm or 420 nm UVcutoff filter) using proprietary calculations. This method eliminates the need for mechanical filter positioning, and enables UV adjustment by Whiteness Index, Tint, Brightness, or UV profile.



■ CM-36dGV

CM-36dGV provides the same functions as the CM-36dG in a vertical format for textile or paper measurements.

Multipurpose

■ CM-36dG Series spectrophotometers can be used in a wide range of industries.

Paint, plastics, textile, glass, film, etc.

■ Performance by model

		CM-36dG	CM-36dGV	CM-36d
Color	Reflectance (SCI/SCE)	●	●	●
	Transmittance	●	●	—
	Measurement area	LAV, LMAV, MAV, SAV		LAV, MAV, SAV
	UV condition setting	100%, 0%, Adjusted		100%
	Repeatability	≤0.02	≤0.02	≤0.03
	Inter-instrument agreement (LAV, SCI)	≤0.12	≤0.12	≤0.15
Gloss	60° gloss measurements	●	●	—
	Measurement area	MAV, SAV		—
Instrument format		Horizontal	Vertical	Horizontal

			CM-36dG					CM-36dGV	CM-36d		
Color	Illumination/ viewing system	Reflectance	di: 8°, de: 8° (diffused illumination, 8° viewing), SCI (specular component included)/SCE (specular component excluded) switchable Conforms to CIE No.15 (2004), ISO7724/1, ASTM E1164, DIN 5033 Teil7, JIS Z 8722 Condition c standard								
		Transmittance	di:0°, de:0° (diffused illumination, 0° viewing) Conforms to CIE No.15 (2004), ASTM E1164, DIN 5033 Teil7, JIS Z 8722 Condition g standard						—		
	Size of integrating sphere		Ø152 mm (6 inches)								
	Detector		Dual 40-element silicon photodiode arrays								
	Spectral separation device		Diffraction grating								
	Wavelength range		360 to 740 nm								
	Wavelength pitch		10 nm								
	Half bandwidth		Approx. 10 nm								
	Reflectance range		0 to 200%; Resolution: 0.01%								
	Light source		Pulsed xenon lamps × 3 (2 with UV cut filters)						Pulsed xenon lamp × 1		
			LAV	LMAV	MAV	SAV	Transmittance		LAV	MAV	SAV
	Illumination area		Ø30 mm	Ø20 mm	Ø11 mm	Ø7 mm	Ø24 mm		Ø30 mm	Ø11 mm	Ø7 mm
	Measurement area		Ø25.4 mm	Ø16 mm	Ø8 mm	Ø4 mm	Ø17 mm		Ø25.4 mm	Ø8 mm	Ø4 mm
	Repeatability		Colorimetric values : Standard deviation within ΔE*ab 0.02 Spectral reflectance : Standard deviation within 0.1% (When a white calibration plate is measured 30 times at 10-second intervals after white calibration)						Colorimetric values : Standard deviation within ΔE*ab 0.03 Spectral reflectance : Standard deviation within 0.1% (When a white calibration plate is measured 30 times at 10-second intervals after white calibration)		
	Inter-instrument agreement		Within ΔE*ab 0.12 (Based on average for 12 BCRA Series II color tiles; LAV/SCI. Compared to values measured with a master body under Konica Minolta standard measurement conditions)						Within ΔE*ab 0.15 (Based on average for 12 BCRA Series II color tiles; LAV/SCI. Compared to values measured with a master body under Konica Minolta standard measurement conditions)		
	UV setting		100% / 0% / Adjusted (Instantaneous numerical adjustment of UV with no mechanical filter movement required)*1; 400 nm and 420 nm UV cutoff filters						No adjustment function (UV100%)		
Gloss	Measurement angle		60°						—		
	Light source		White LED						—		
	Detector		Silicon photodiode						—		
	Measurement range		0-200 GU; Resolution: 0.01 GU						—		
	Measurement area		MAV (LAV/LMAV/MAV color measurement area): 10 × 8 mm ellipse SAV (SAV color measurement area): Ø3 mm						—		
	Repeatability		Standard deviation within 0 to 10 GU: 0.1 GU 10 to 100 GU: 0.2 GU 100 to 200 GU: 0.2% (When measured 30 times at 10-second intervals)						—		
	Inter-instrument agreement		0 to 10 GU: ±0.2 GU 10 to 100 GU: ±0.5 GU (MAV. Compared to values measured with a master body under Konica Minolta standard conditions)						—		
	Geometry		JIS Z 8741 (MAV), JIS K 5600, ISO 2813, ISO7668 (MAV), ASTM D523-08, ASTM D2457-13, DIN 67530						—		
Measurement time			Approx. 3.5 second (SCI+SCE measurement) Approx. 4 second (SCI+SCE+GLOSS measurement)						—		
Minimum interval between measurements			Approx. 4 second (SCI+SCE measurement) Approx. 4.5 second (SCI+SCE+GLOSS measurement)						Approx. 4 second (SCI+SCE measurement)		
Sample viewer function			Using internal camera. Image viewable/copiable using optional software such as SpectraMagic NX Ver. 3.2 or later								
Internal Performance Check*2			WAA (Wavelength Analysis & Adjustment) Technology								
Interface			USB2.0								
Target mask auto detection			Yes								
Power			Dedicated AC adapter								
Operating temperature / humidity range			Temperature: 13 to 33°C, Relative humidity: 80% or less (at 33°C) with no condensation								
Storage temperature / humidity range			Temperature: 0 to 40°C, Relative humidity: 80% or less (at 35°C) with no condensation								
Size (W×H×D)			Approx. 248×250×498 mm					Approx. 300×677×315 mm	—		
Weight			Approx. 8.4 kg					Approx.14.0 kg	Approx.8.3 kg		
Standard Accessories			White Calibration Plate; Target Masks (LAV, LMAV, MAV, SAV); Gloss Calibration Plate; Zero Calibration Box; USB Cable (2 m); AC Adapter; Dust Cover; Accessory Case; Cleaning Cloth					White Calibration Plate; Target Masks (LAV, LMAV, MAV, SAV); Gloss Calibration Plate; Zero Calibration Box; USB Cable (2 m); AC Adapter; Dust Cover; Accessory Case; Cleaning Cloth	White Calibration Plate; Target Masks (LAV, MAV, SAV); Zero Calibration Box; USB Cable (2 m); AC Adapter; Dust Cover; Accessory Case		
Optional Accessories			Color Data Software SpectraMagic NX; Transmittance Specimen Holder; Cells (Glass; 2 mm, 10 mm, 20 mm); Plastic Cells (2 mm, 10 mm, 20 mm); Transmittance Zero Calibration Plate; Color Plates					Color Data Software SpectraMagic NX; Transmittance Zero Calibration Plate; Opacity Jig; Color Plates	Color Data Software SpectraMagic NX; Color Plates		

*1 Numerical adjustment of UV requires UV Adjustment Software (included with optional SpectraMagic NX Pro Ver. 3.2 or later)
*2 WAA license purchase required.

SAFETY PRECAUTIONS

For correct use and for your safety, be sure to read the instruction manual before using the instrument.

● Always connect the instrument to the specified power supply voltage. Improper connection may cause a fire or electric shock.

ISO Certifications of KONICA MINOLTA, Inc., Sakai Site

ISO 9001 JQA-QMA15888 Design, development, manufacture/ manufacturing management, calibration, and service of measuring instruments

ISO 14001 JQA-E-80027 Design, development, manufacture, service and sales of measuring instruments

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https://konicaminolta.com/instruments/network