



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.

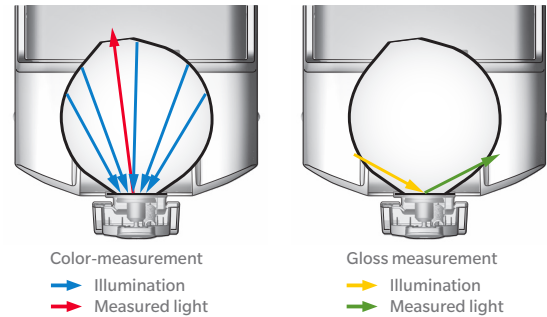
CM-36dGV: Vertical format model with same functions as CM-36dG for textile or paper measurements.

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*)

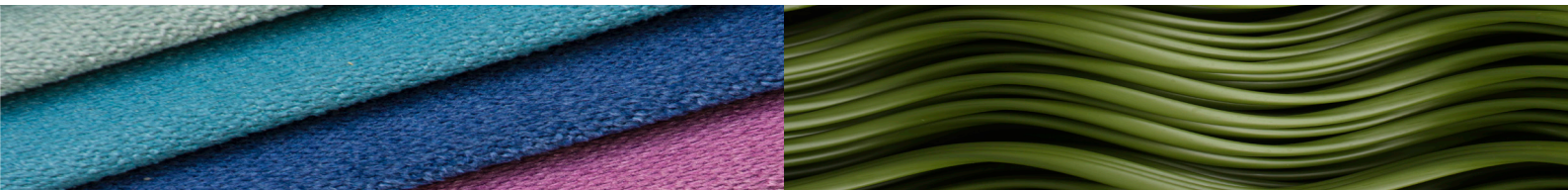
WAA (Wavelength Analysis & Adjustment; available with license purchase) provides worry-free, higher-reliability measurements and minimizes system problems by suppressing shifts in measurement values due to sudden temperature changes, etc. The data required for performing analysis and adjustment are obtained 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).

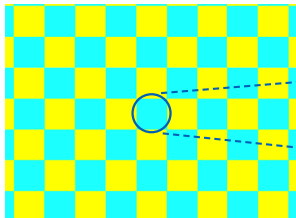


Contributes to digital quality control in the supply chain by providing high-precision simultaneous measurements of color and gloss.

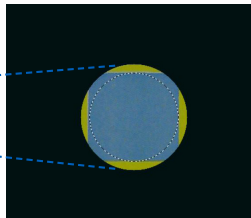


■ High usability for improved productivity

- ✓ 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.

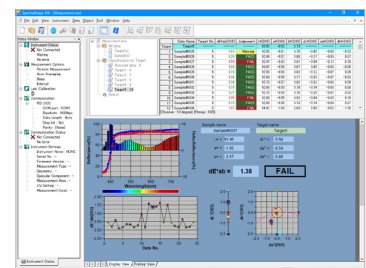
* SpectraMagic NX or other software required.

■ 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

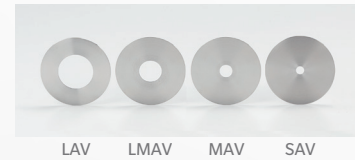
* The computer must be running one of the above OS and meet or exceed the below specifications. ● CPU: Pentium® III 600 MHz equivalent or faster ● Memory: 128 MB or more (256 MB or more recommended) ● Hard disk: 450 MB or more of free space for installation ● Display: Resolution: 1,024 x 768 pixels or 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
 OWindows® is a trademark or registered trademark of Microsoft Corporation in the USA and other countries. OPentium® is a trademark or registered trademark of Intel Corporation in the USA and other countries.



Usability

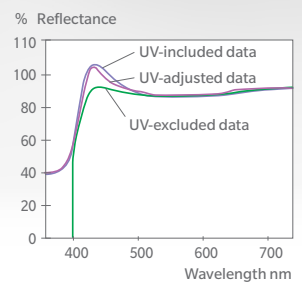
■ Handles a wide variety of measurement subjects

- ✓ 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.



■ 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 | di: 8°, de: 8° (diffused illumination, 8° viewing angle), SCI (specular component included)/SCE (specular component excluded) switchable Conforms to DIN 5033 Teil7, JIS Z 8722 Condition "c", ISO7724/1, CIE No.15(2004), ASTM E1164 for reflectance measurements | | | | | | | | |
| 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 under Konica Minolta standard measurement conditions) | | | | | | 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 under measurement conditions) | | |
| 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% (Measured 30 times at 5-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, JIS K 5600, ISO 2813, ISO 7668, ASTM D523-08, ASTM D2457-13, DIN 67530 | | | | | | | | |
| Measurement time | Approx. 3.5 second (SCI+SCE measurement) Approx. 4 second (SCI+SCE+GLOSS measurement) | | | | | | Approx. 3.5 second (SCI+SCE 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 | | | | | | | | |
| 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 | | | Approx. 248×250×498 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)

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- Displays shown are for illustration purposes only.
- The specifications and appearance shown herein are subject to change without notice.

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

ISO 9001:2015

Design, development, manufacture/
manufacturing management, calibration, and
service of measuring instruments



ISO 14001

ISO 14001:2015

Design, development,
manufacture, service and sales
of measuring instruments

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