KONICA MINOLTA

Spectrophotometer

CM-26dG
CM-26d
CM-25d

Advanced performance for
the times.
Color Management
for global supply chains.

The Standard in Measuring Color & Light

Giving Shape to Ideas

Highest level of repeatability with high inter-instrument agreement, speed and usability.

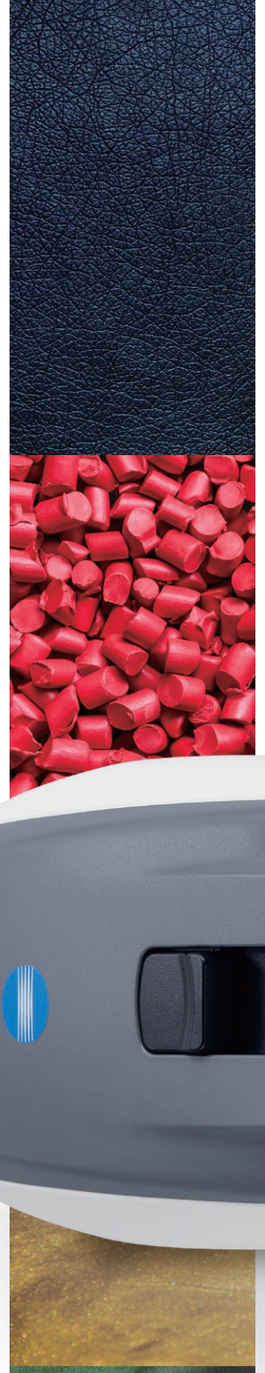
The CM-26dG Series from Konica Minolta offers three variations of advanced portable spectrophotometers.

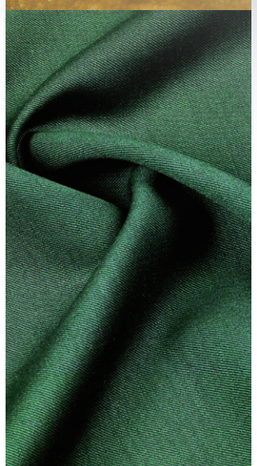
The high-end CM-26dG and CM-26d models bring the industry's highest level of accuracy, with the CM-26dG capable of simultaneously measuring color and gloss, and the CM-26d specifically for measuring color.

The CM-25d is a single aperture model.

Spectrophotometer

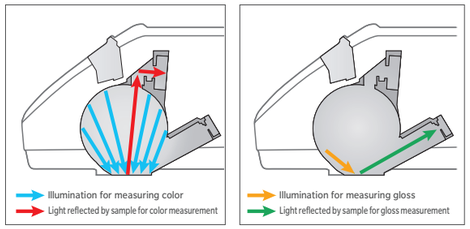
CM-26dG | CM-26d | CM-25d





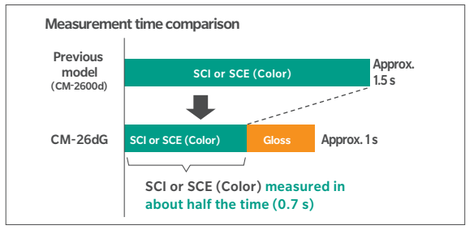
■ 2-in-1 instrument for measuring color and gloss

The CM-26dG performs the job of two instruments by simultaneously measuring color and gloss.
The integrated gloss sensor will significantly improve the speed of the inspection process & remove the need for a separate gloss device.



■ Improved measurement speed

The CM-26dG measures color in about half the time of previous models, at approx. 0.7 second (SCI or SCE).
Measurements of both color and gloss (SCI or SCE + Gloss) can be made in around 1 second.
The faster measuring speed directly improves efficiency.



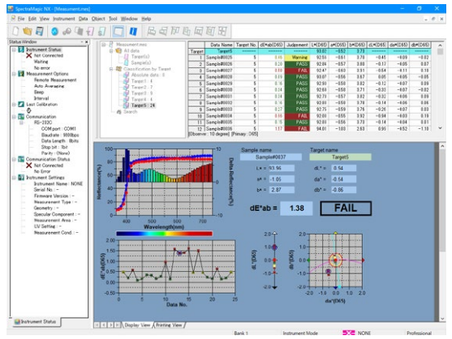
(Actual size)

■ Highest levels of repeatability and inter-instrument agreement amongst portable spectrophotometers

Supply chains are constantly being built and modified, and data needs to be seamlessly shared amongst both internal and external partners. High repeatability and high inter-instrument agreement are increasingly prerequisites for portable spectrophotometers to expedite specification, supply and quality control. The CM-26dG and CM-26d realize the highest level of inter-instrument agreement amongst currently available portable spectrophotometers, at ΔE*ab 0.12 (BCRA average amongst 12 colors) ; this is around half that of their predecessor the CM-2600d. When measuring gloss, the inter-instrument agreement of the CM-26dG is within ±0.2 GU (0-10 GU) or ±0.5 GU (10-100 GU). The improved accuracy of the CM-26dG will allow supply chains to operate at closer tolerances and facilitate digital color management, cutting reliance on physical standards, greatly improving timelines and associated costs.

Option Color Data Software SpectraMagic NX Ver.2.9 or later

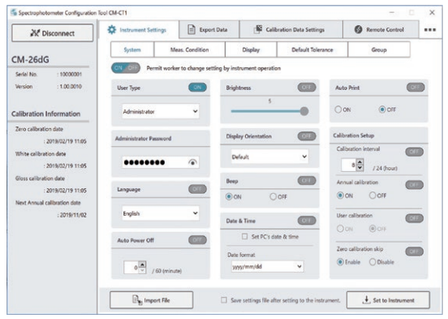
SpectraMagic NX is color management software that gives users a plethora of functions for viewing data and for operating and configuring their spectrophotometers from a computer. Users can customize templates and reports by arranging and editing spectral graphs, color difference graphs (2D, 3D), PASS/FAIL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



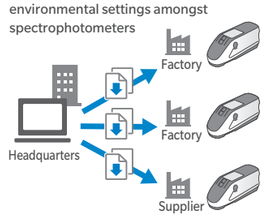
You can see the details in the catalog from the following 2D code. ↓

Quick and easy-to-use Spectrophotometer Configuration Tool CM-CT1

The CM-CT1 gives manufacturers the means for easily and quickly setting up their CM- 26dG Series spectrophotometers. Moreover, when multiple devices are used or when the same conditions need to be set amongst multiple factories or suppliers, settings can be compiled into a file and shared.



Easily unify measurement conditions and environmental settings amongst spectrophotometers



Spectrophotometer Configuration Tool CM-CT1 ●OS: Windows® 10 Pro 32 bit, 64 bit / Windows® 11 Pro ●CPU: 2.0 GHz equivalent or faster ●Memory: 2 GB or more ●Hard disk: 10 GB or more of free space for installation ●Display: Resolution: 1,024 x 720 pixels or more/ 16-bit colors or more ●Other: USB port (For connecting to spectrophotometers)

•Windows® is a trademark or registered trademark of Microsoft Corporation in the USA and other countries.

■ Viewfinder

The viewfinder brightly illuminates the measurement point with an LED to make target alignment, easier and more precise. The viewfinder of the CM-26dG also includes a target ring that makes it even easier to identify the measurement area.
Using the viewfinder greatly reduces measurement errors when setting measurement points on patterns and prints.

■ Compact, lightweight streamlined body

Designed to work in hard-to-reach places, the CM -26dG Series spectrophotometers allow users to take measurements where previous models could not. The nose is angled downward and rounded at the corners to get into cramped spots like dashboards at a point near the windshield.
The measurement button is accessible from both sides of the unit, improving usability for left handed operators or in otherwise difficult to reach areas.

JOB function execution screen (Actual size)

■ High usability and functional versatility

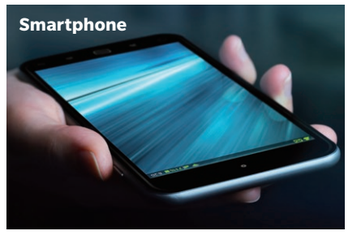
<JOB Function>

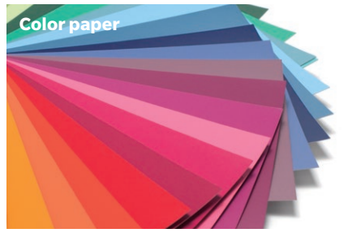
Measurement instructions (including photographs) for routine tasks can be uploaded to the instrument using SpectraMagic NX (Ver. 2.9 or later, sold separately).

<Bluetooth® ready>

Data can be wirelessly transmitted to computers or other paired devices over a Bluetooth connection.

CM-26dG Series spectrophotometers can be used in a wide range of industries.





Performance by model (Feature comparison)

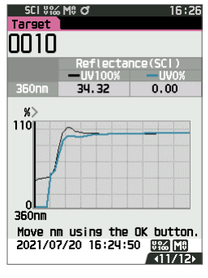
	CM-26dG	CM-26d	CM-25d
SCI	●	●	●
SCE	●	●	●
60° gloss	●	—	—
MAV (Ø8 mm)	●	●	●
SAV (Ø3 mm)	●	●	—
UV setting	100% / 0% / Adjusted	100% / 0% / Adjusted	0% only
Inter-instrument agreement (Color)	<0.12	<0.12	<0.20
Repeatability (σΔE*ab)	<0.02	<0.02	<0.04
Wavelength range	360 to 740 nm	360 to 740 nm	400 to 700 nm

✓ Standard color automatic selection function

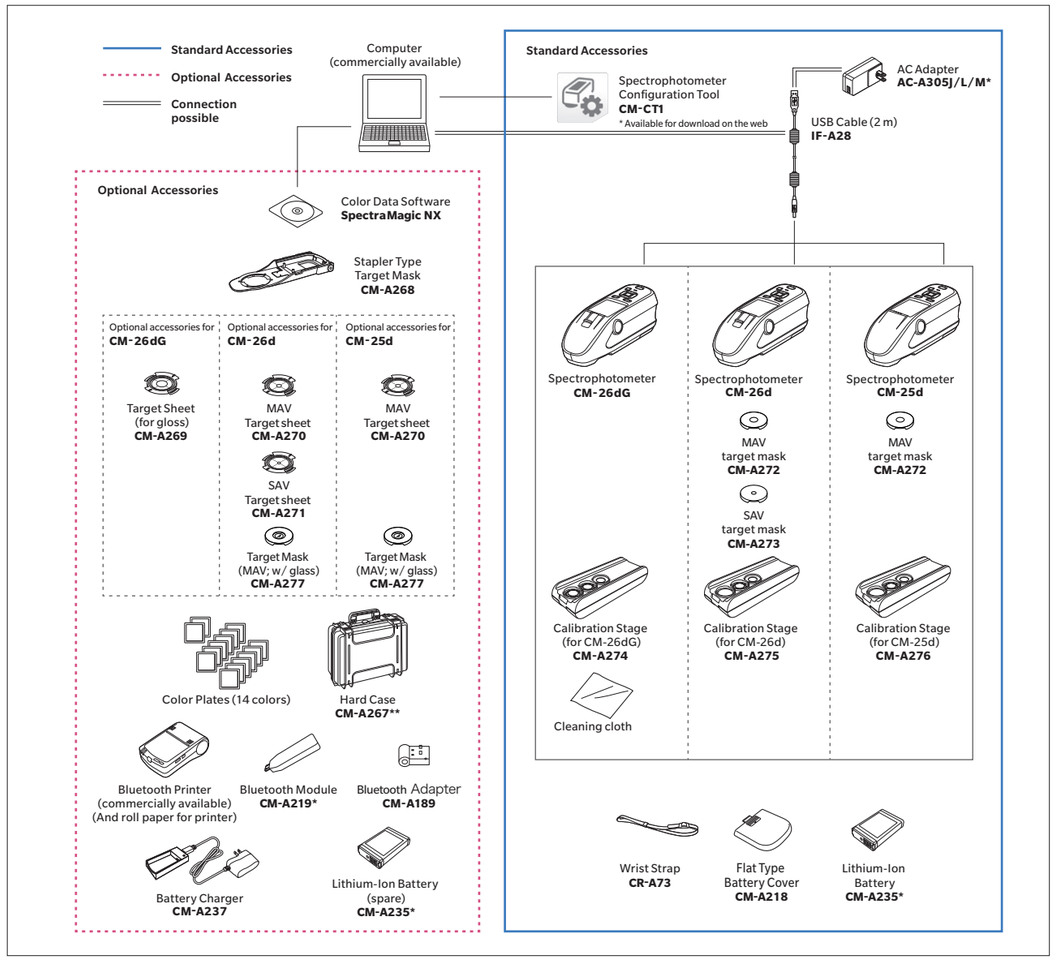
When this function is set, the optimum target color candidates for comparison from among the target colors registered in advance are automatically displayed after sample measurement. This makes it easy to determine the appropriate target color.
Even when various colors are measured in the inspection process in the automobile industry, etc., there is no need to manually reset the target color before measurement. The target color can be easily selected from the candidates displayed after measurement.
This function can shorten the inspection time.

✓ Checking for fluorescent whitening agents and performing simple inspection (CM-26dG/CM-26d only)

Measurements under 100% UV and 0% UV can be taken at the same time and the results can be displayed on the same screen. This feature is useful to check for the presence of optical brighteners and perform simple inspection. By comparing and evaluating data such as reflectance under 100% UV and 0% UV, the characteristics of the base material and the effect of the fluorescent whitening material can be confirmed.

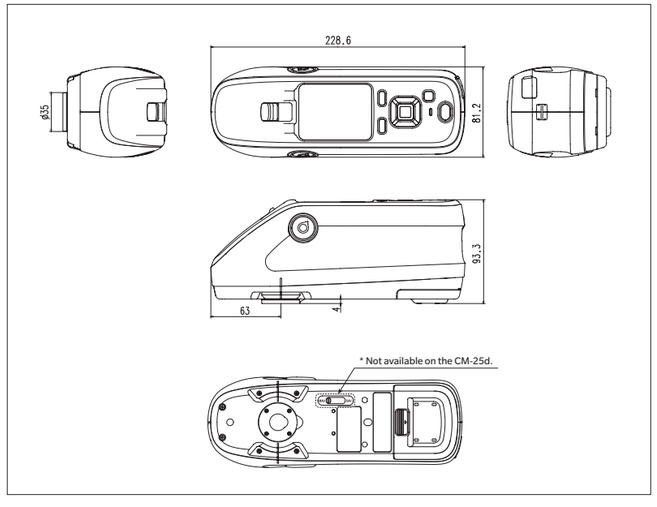


System Diagram



* Depending on the location, some accessories may not be available.
** May be included as a standard accessory in some regions.

Dimensions (Units: mm)



Specifications

		CM-26dG	CM-26d	CM-25d
Color	Illumination/viewing system	di: 8°, de: 8° (diffuse illumination: 8° viewing) SCI (specular component included) / SCE (specular component excluded) switchable Conforms to CIE No.15 (2004), ISO7724/1, ASTM E1164 (SCI), DIN 5033 Teil7, JIS Z 8722 Condition c standard		
	Integrating sphere	Ø54 mm		
	Detector	Dual 40-element silicon photodiode arrays		Dual 32-element silicon photodiode arrays
	Spectral separation device	Planar diffraction grating		
	Wavelength range	360 to 740 nm		400 to 700 nm
	Measurement wavelength pitch	10 nm		
	Half bandwidth	Approx. 10 nm		
	Reflectance range	0 to 175%; Resolution: 0.01%		
	Light source	Pulsed xenon lamp ×2		Pulsed xenon lamp ×1(with UV cut filter)
	Illumination area	12 × 12.5 mm (circle + ellipse)	MAV : Ø12 mm SAV : Ø6 mm	MAV : Ø12 mm
	Measurement area	MAV: Ø8 mm, SAV: Ø3 mm		MAV : Ø8 mm
	Repeatability	Standard deviation within ΔE*ab 0.02		Standard deviation within ΔE*ab 0.04
		(When a white calibration plate is measured 30 times at 5-second intervals after white calibration under Konica Minolta standard conditions)		
	Inter-instrument agreement	Within ΔE*ab 0.12		Within ΔE*ab 0.2
		(Based on average for 12 BCRA Series II color tiles; MAV SCI; compared to values measured with a master body under Konica Minolta standard conditions)		
	UV setting	100% / 0% / Adjusted (Instantaneous numerical adjustment of UV with no mechanical filter movement required)*1; 400 nm UV cutoff filter		No adjustment function(UV0%)
	Observer	2° Standard Observer, 10° Standard Observer		
	Illuminant	A, C, D50, D65, F2, F6, F7, F8, F10, F11, F12, ID50, ID65, User-defined illuminant*2 (Simultaneous evaluation with two light sources possible)		
	Display items	Colorimetric values/graph, color difference values/graph, spectral graph, pass/fail judgment, pseudocolor		
	Color spaces	L*a*b*, L*C*h, Hunter Lab, Yxy, XYZ, and color difference in these spaces; Munsell (C)		
	Indices	MI; WI (ASTM E313-73); YI (ASTM E313-73; ASTM D1925); ISO brightness (ISO 2470); WI/Tint (CIE/ Ganz); Tristimulus Strength; Opacity; Grey Scale (ISO 105-A05), K/S strength (Apparent (ΔE*ab), Maximum absorption, Total wavelength); Staining degree (ISO 105-A04); User index*2	MI; W (I ASTM E313-73); YI (ASTM E313-73; ASTM D1925); ISO brightness (ISO 2470); WI/Tint (CIE/ Ganz); Tristimulus Strength; Opacity; Grey Scale (ISO 105- A05); 8° gloss value; K/S strength (Apparent (ΔE*ab), Maximum absorption, Total wavelength); Staining degree (ISO 105-A04); User index*2	MI; W (I ASTM E313-73); YI (ASTM E313-73; ASTM D1925); ISO brightness (ISO 2470); WI/Tint (CIE); Tristimulus Strength; Opacity; Grey Scale (ISO 105-A05); 8° gloss value; K/S strength (Apparent (ΔE*ab), Maximum absorption, Total wavelength); Staining degree (ISO 105-A04); User index*2
	Color difference equations	ΔE*ab (CIE1976) ; ΔE^*_{94} (CIE1994); ΔE_{00} (CIEDE2000); CMC (l:c); Hunter ΔE; DIN99o; FMC-2		
Gloss	Measurement angle	60°	—	
	Light source	White LED	—	
	Detector	Silicon photodiode	—	
	Color sensitivity	Spectrally adjusted to CIE photopic luminous efficiency V(λ) under CIE illuminant C	—	
	Measurement range	0 to 200 GU; Resolution: 0.01 GU	—	
	Measurement area	MAV : 10×7 mm ellipse, SAV : Ø3 mm	—	
	Repeatability	Standard deviation 0 to 10 GU: Within 0.1 GU 10 to 100 GU: Within 0.2 GU 100 to 200 GU: Within 0.2% (When measured 30 times at 5-second intervals under Konica Minolta standard measurement conditions)	—	
	Inter-instrument agreement	0 to 10 GU: Within ± 0.2 GU 10 to 100 GU: Within ± 0.5 GU (MAV; compared to values measured with a master body under Konica Minolta standard measurement conditions)	—	
	Applicable standards	JIS Z8741 (MAV), JIS K5600, ISO 2813, ISO 7668 (MAV), ASTM D523-08, ASTM D2457-13, DIN 67530	—	
Measurement time		Approx. 1 seconds (Measurement mode: SCI + Gloss or SCE + Gloss)	Approx. 0.7 s (Measurement mode: SCI or SCE)	
		(From pressing trigger button to measurement completion)		
Minimum measurement interval		Approx. 2 seconds (Measurement mode: SCI + Gloss or SCE + Gloss)	Approx. 1.5 s (Measurement mode: SCI or SCE)	
Data memory		1,000 target data + 5,100 sample data		
Battery performance		Measurement mode: SCI + Gloss or SCE + Gloss	Measurement mode: SCI or SCE	
		Approx. 3,000 measurements (approx. 1,000 measurements when using Bluetooth) when measurements are taken at 10-second intervals at 23°C with the dedicated lithium battery		
Viewfinder function		Available (with white LED illumination)		
Display		2.7-inch TFT color LCD with reversible portrait viewing mode		
Display language		English, Japanese , German, French, Italian, Spanish, Simplified Chinese, Portuguese, Russian, Turkish, Polish		
Interface		USB 2.0; Bluetooth (SPP-compatible. Optional Bluetooth module required)		
Power		Dedicated lithium-ion battery (removable), USB bus power (with lithium-ion battery installed), Dedicated AC adapter (with lithium-ion battery installed)		
Charging time		Approx. 6 h		
Operating temperature/humidity range		Temperature: 5 to 40°C; Relative humidity: 80% or less (at 35°C) with no condensation		
Storage temperature/humidity range		Temperature: 0 to 45°C; Relative humidity: 80% or less (at 35°C) with no condensation		
Size		Approx. 81 (W) × 93 (H) × 229 (D) mm		
Weight		Approx. 660 g	Approx. 630 g	Approx. 620 g

*1 Firmware version 1.10 or later and optional Color Management Software SpectraMagic NX (Ver. 3.0 or later) is required to use UV Adjusted setting.
*2 Optional Color Management Software SpectraMagic NX (Ver. 2.9 or later) is required for setting user-configured illuminants or user indexes.

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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