

# Spectrophotometer CM-25cG

# New standard model for color and gloss measurement !

The two-in-one model that can simultaneously measure both color and gloss !

High inter-instrument-agreement !

Form and functions suitable for measurement of automotive interior trim and materials !



Giving Shape to Ideas

The spectrophotometer CM-25cG is a twoin-one model for simultaneous color and gloss measurement.



The 2.7-inch TFT color LCD makes measurements easy to read, and the easy-to-understand GUI provides high usability.

KONICA MINOLTA

Form and functions designed specifically for quality control of color and gloss of automotive interior trim. The industry's next standard model.

A two-in-one model for color and gloss



The CM-25cG greatly improves work efficiency by eliminating the need to switch between two instruments — one for color, one for gloss — for each measurement, thus reducing takt time, and providing color and gloss data from exactly the same measurement point for more accurate quality control.



The CM-25cG offers high inter-instrument agreement of within  $\Delta E^*$  0.15 (typical) (MAV) for color and ±0.2 GU for gloss measurements of 1 to 10 GU. This high interinstrument agreement enables digital data management for more efficient quality control among your factories or between your company and your partners.





By using a 45°c:0° illumination/viewing system with ringshaped illumination having light sources radially located at certain intervals, the CM-25cG provides stable data while minimizing instrument rotational effects. The system also provides data with high accuracy and repeatability even if there is a small gap between the measurement aperture and the subject.

Other features include high-speed measurement, cablefree operation, and viewing ports and measuring buttons on both the right and left sides of the instrument body for easy operation and high measurement stability in any situation.

\* Level of subject visibility through viewing port depends on measurement subject.

Ideal form and functions for measuring automotive interiors



The CM-25cG's sleek, compact, lightweight body is easy to hold, and can measure even in narrow, deep-set spaces. Additionally, changeable apertures allow measurements of subjects which are small or curved.

### Color Data Software SpectraMagic DX (Option) Professional Edition (Version. 1.0) Lite Edition



The new Color Data Software SpectraMagic DX enables easy management of data measured with the CM-25cG, and offers a new Instrument Diagnosis function to help ensure continued high instrument performance.
OS : Windows<sup>®</sup> 7 Pro 32-bit / 64-bit,
Windows<sup>®</sup> 8 10ro 32-bit / 64-bit

		Windows® 8.1Pro 32-bit/64-bit,
		Windows® 10 Pro 32-bit / 64-bit
CPU	:	Intel <sup>®</sup> Core i5 2.7GHz or higher (recommended)
Memory	:	At least 2 GB (4 GB or more recommended)
Hard disk	:	20 GB of available hard disk space
		At least 10 GB of available disk space is required on the system drive (drive where the OS is installed) for database.
Display	:	Display hardware capable of displaying 1,280 x 768 pixels/16-bit color or better
Other	:	USB port required for protection key if used. Not necessary for electronic license.
Compatible Instruments	:	USB or serial port required for connection to instrument. CM-25cG, CM-M6, CM-2500c

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#### **Main Specifications**

	Model	Spectrophotometer CM-25cG
Color	Illumination/	45°c:0°
	Detector	Dual 40-element silicon photodiode arrays
	Spectral separation	Planar diffraction grating
	Wavelength range	360-740 nm
	Wavelength pitch	10 nm
	Half bandwidth	Approx. 10 nm
	Measurement range	0-175 %; Output/display resolution 0.01 %
	Light source	Pulsed xenon lamp
	Measurement/ illumination area	MAV:Ø8 mm/12×16 mm, SAV:Ø3 mm/12×16 mm
	Repeatability	Chromaticity value∶Standard deviation within ∆E*ab 0.04 (When a white calibration plate is measured 30 times at 10-second intervals after white calibration)
	Inter-instrument agreement	Within $\Delta E^*ab 0.15$ (Typical)(MAV) (Based on 12 BCRA Series II color tiles compared to values measured with a master body under Konica Minolta standard measurement conditions)
	Observer	2 ° or 10 ° Standard Observer
	Illuminant	A,C,D50,D65,F2,F6,F7,F8,F10,F11,F12,ID50,ID65,User illuminant (simultaneous evaluation with two illuminants possible)
	Displayed data	Spectral values/graph, colorimetric values/graph, color-difference values/graph, pass/fail judgement, pseudocolor
	Colorimetric data	L*a*b*, L*C*h, Hunter Lab, Yxy, XYZ, and color differences in these spaces; Munsell
	Indexes	MI, WI (ASTM E313), YI (ASTM E313, ASTM D1925), ISO Brightness (ISO2470), WI/Tint (CIE)
	Color-difference formula	ΔΕ*ab (CIE 1976), ΔΕ*94 (CIE 1994), ΔΕ00 (CIE DE2000), CMC (I:c), ΔΕ (Hunter)
	Standard compliance	CIE No. 15, ISO 7724/1, ASTM E179, DIN 5033 part7, JIS Z8722
	Measurement geometry	60 °
	Light source	LED
	Detector	Silicon photo diode
	Measurement range	0-200 GU; Output/display resolution : 0.01 GU
	Measurement area	MAV:Ø10 mm, SAV:Ø3 mm
Gloss	Repeatability	0-10 GU : 0.1 GU 10-100 GU:0.2 GU >100 GU : 0.2 % of displayed value (Under Konica Minolta standard measurement conditions)
	Inter-instrument agreement	0-10 GU :±0.2 GU 10-100 GU :±0.5 GU (MAV. Compared to values measured with a master body under Konica Minolta standard measurement conditions)
	Standard compliance	JIS Z8741, JIS K5600, ISO 2813, ISO 7668, ASTM D523-08, ASTM D2457-13, DIN 67530
Measure	ement time	Approx. 1 seconds (to data display/output)
Minimum	n measurement interval	Approx. 2 seconds
Battery performance		Approx. 3,000 measurements/charge (Stand-alone measurement al 10-second intervals at 23 °C) Approx. 1,000 measurements/charge (When using Bluetooth® communication)
Displaye	ed languages	Japanese, English, German, French, Italian, Spanish, Chinese (Simplified). Portuguese, Russian, Turkish, Polish
Display		2.7-inch TFT color LCD
Interfaces		USB2.0, Bluetooth (Option)
Data memory		Target data: 2,500 measurements; Sample data: 7,500 measurements
Power		Rechargeable lithium-ion battery, USB bus power
Charging time		Approx. 6 hours when no charge remains
Operation temperature/ humidity range		5-40 °C, relative humidity is 80% or less (at 35°C) with no condensation
Storage temperature/ humidity range		0-45 °C, relative humidity is 80% or less (at 35°C) with no condensation
Size (L×W×H)		224x81x81mm
Weight		Approx. 600 g (Including battery)

#### System Diagram



#### Dimensions (Units : mm)



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



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. Be sure to use the specified batteries. Using improper batteries may cause a fire or electric shock. Osaka, Japan New Jersey, U.S.A. European Headquarter /BENELUX Phone: 888-473-2656 (in USA), 201-236-4300 (outsid

KONICA MINOLTA, INC. Konica Minolta Sensing Americas, Inc. Konica Minolta Sensing Europe B.V.

Konica Minolta (CHINA) Investment Ltd.

Konica Minolta Sensing Singapore Pte Ltd.

Konica Minolta Sensing Korea Co., Ltd.

Addresses and telephone/fax numbers are subject to change without notice. For the latest contact information, please refer to the KONICA MINOLTA Worldwide Offices web page :

German Office

French Office

UK Office Italian Office Swiss Office

Nordic Office Polish Office

Beijing Office

SE Sales Division

Guangzhou Office

Chongging Office

Qingdao Office

Wuhan Office

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Nieuwegein, Netherlands München, Germany Roissy CDG, France Warrington, United Kingdom Cinisello Balsamo, Italy Dietikon, Switzerland Västra Frölunda Sweden Wroclaw, Poland Shanghai, China Beijing, China Guangdong, China Chongqing, China Shandong, China Hubei, China Singapore Goyang-si, Korea

Phone : +31(0)30 Phone : +49(0)89 Phone : +43(0)18 Phone : +33(0)18 Phone : +44(0)192 Phone : +39 02849 Phone : +41(0)43 Phone : +46(0)31 Phone : +48(0)71 Phone : +86- (0)21 Phone : +86- (0)10 Phone : +86- (0)20 Phone : +86- (0)23 Phone : +86- (0)53 Phone : +86- (0)27 Phone : +65 6563-Phone: +82(0)2-52 23-9726



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de USA)	Fax: 201-785-2482
248-1193	Fax:+31(0)30248-1280
4357 156 0	Fax: +49(0)89 4357 156 99
0 11 10 70	Fax:+33(0)180111082
25 467300	Fax:+44(0)1925711143
9488.00	Fax: +39 02849488.30
322-9800	Fax:+41(0)43 322-9809
7099464	
73452-11	Fax: +48 (0)71 734 52 10
-5489 0202	Fax:+86-(0)21-5489 0005
-8522 1551	Fax: +86-(0)10-8522 1241
-3826 4220	Fax: +86-(0)20-3826 4223
-6773 4988	Fax : +86- (0)23-6773 4799
2-8079 1871	Fax: +86-(0)532-8079 1873
-8544 9942	Fax: +86-(0)27-8544 9991
-5533	Fax:+65 6560-9721
23-9726	Fax:+82(0)31-995-6511

### http://konicaminolta.com/instruments/network