

## Spectrophotometer

## CM-M6

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# High precision, multi-angle model for measuring automotive exteriors from 6 angles!



#### **Display examples**

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Sample ♦ 0001 No Name		Sample	9	0001 No I	Nane	
0001 White		000 <b>Wh</b>				<b>Ø</b>
1 10°/D65	0.23	<b>1</b> 0 10	^/D65	None	ΔFF	0.00
<b>⊙</b> ₹ 15°			ΔE00	ΔL*	Δ8*	∆b*
-15° L*	97.22 -0.28	-15°	0.01	0.01	0.00	-0.01
15° L* -100 b* 10	0.27 00	15°	0.02	0.01	-0.00	0.02
25° 100	100	25^	0.02	0.01	-0.01	0.01
45°	a*	45°	0.01	0.01	-0.00	0.01
75°		75°	0.02	0.01	-0.01	0.01
110°	-100	110°	0.01	0.01	0.00	0.00
2016/09/02 09:30:29						
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The CM-M6 has a built-in 3.5-inch color LCD that can display measured values both numerically and on colored graphs, for easier visualization of results.

The CM-M6 is a compact, lightweight, multi-angle spectrophotometer. Incorporating a new patented 'double-path optical system', it exhibits outstanding versatility in measuring automotive exteriors.



### Compact, lightweight, vertical format



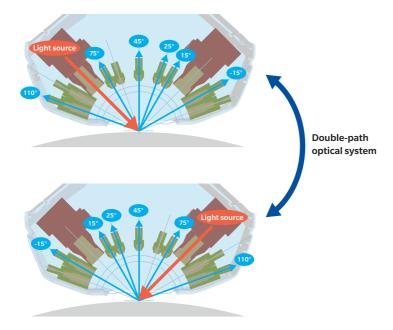
The compact body (with hand strap) can be stably held with one or two hands. Moreover, it is loaded with features ideal for measuring vehicle exteriors such as a rubber cover around the measurement aperture to safeguard measurement subjects against scratching and Bluetooth® support (option) for sending measurement data to remote devices over wireless connections.

#### Ø6 mm diameter viewing beam for measuring small surfaces



The viewing beam is 6 mm in diameter, so small surfaces that were hard to measure with earlier models can be stably measured.

#### Multi-angle measurements (1 light source, 6 viewing angles)



Illumination angle: 45°

Aspecular viewing angles: -15°, 15°, 25°, 45°, 75°, 110°

\* These 6 viewing angles make it possible to detect metallic and pearl colors with higher accuracy than previous spectrophotometers.

#### Double-path optical system

The CM-M6 has duplicate illumination/viewing systems symmetrical about its center axis. This system ensures high measuring stability even when the colorimeter is slightly tilted and makes it possible to stably measure R300 curved surfaces like side mirrors.

#### 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-M6, and offers a new Instrument Diagnosis function to help ensure continued high

Windows® 7 Pro 32-bit / 64-bit,

Windows® 8.1Pro 32-bit/64-bit, Windows® 10 Pro 32-bit/64-bit

CPU Intel® Core i5 2.7GHz or higher (reco At least 2 GB (4 GB or more recommended)

Display

Other

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 hardware capable of displaying 1,280 x 768 pixels/16-bit

color or better

Two USB ports required for protection key if used. Not necessary for electronic license.

USB or serial port required for connection to instrument.

Compatible Instruments : CM-25cG, CM-M6, CM-2500c

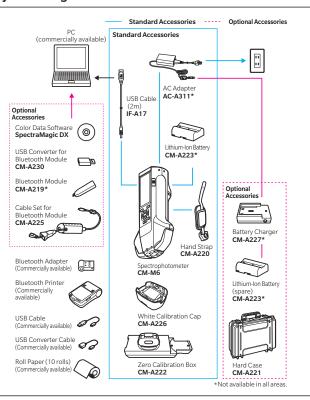
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#### **Main Specifications**

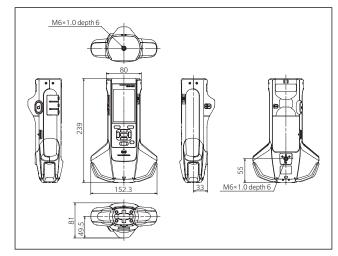
Model	Spectrophotometer CM-M6	
Illumination/viewing system	45° illumination : -15°/15°/25°/45°/75°/110° aspecular viewing angles with double-path technology	
Detector	Dual 40-element silicon photodiode arrays	
Spectral separation device	Linear variable filter	
Wavelength range	400-700 nm	
Wavelength pitch	10 nm	
Measurement range	6 angles: 0-600%; Output/display resolution: 0.01%	
Light source	High-CRI white LED	
Measurement time	Approx. 4.5 seconds	
Minimum measurement interval	Approx. 5 seconds	
Battery performance	Approx. 1,500 measurements/charge (at 10-second intervals at 23°C)	
Measurement/ illumination area	Ø6 mm/Ø12 mm	
Repeatability	Chromaticity value :Standard deviation within ∆E*ab 0.05 (When a white calibration plate is measured 30 times at 10-second intervals after white calibration)	
Inter-instrument agreement	Within $\Delta E^*$ ab 0.2 (Typical) (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 (simultaneous evaluation with two illuminants possible)	
Displayed data	Colorimetric values, color-difference values/graph, line graph (colorimetric/color-difference values), pass/fail judgement	
Colorimetric data	L*a*b*, L*C*h	
Indexes	MI, FF value (Flop value)	
Color-difference formula	ΔΕ*ab (CIE 1976), Δ(L*a*b*), Δ(L*C*H*), CMC (I:c), ΔΕ*94 (CIE 1994), ΔΕ00 (CIE DE2000), ΔΕ (DIN 6175)	
Data memory	Target data: 200 measurements; Sample data: 800 measurements	
Pass/Fail judgement	Tolerances can be set for color-difference values	
Displayed languages	Japanese, English, German, French, Italian, Spanish, Chinese (Simplified), Portuguese, Russian, Turkish, Polish	
Display	3.5-inch TFT color LCD	
Interfaces	USB2.0, Bluetooth (Option)	
Power	Rechargeable lithium-ion battery (removable), dedicated AC adapter	
Charging time	Approx. 5 hours when no charge remains	
Operation temperature/ humidity range	0-40 °C, relative humidity is 80% or less (at 35 °C) with no condensation	
Storage temperature/ humidity range	-20-45 °C, relative humidity is 80% or less (at 35 °C) with no condensation	
Size (W×H×D)	Approx. 152 × 239 × 81 mm	
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Approx. 1.1 kg (Including battery)

#### **System Diagram**



#### Dimensions (Units: mm)



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  Bluetooth\* is a registered trademark of Bluetooth SIG, Inc. and is used under license
- Displays shown are for illustration purpose 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.

●Be sure to use the specified batteries. Using improper batteries may cause a fire or electric shock.





Certificate No : LRQ 09600 Registration Date : March 3,

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

Konica Minolta (CHINA) Investment Ltd.

Weight

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