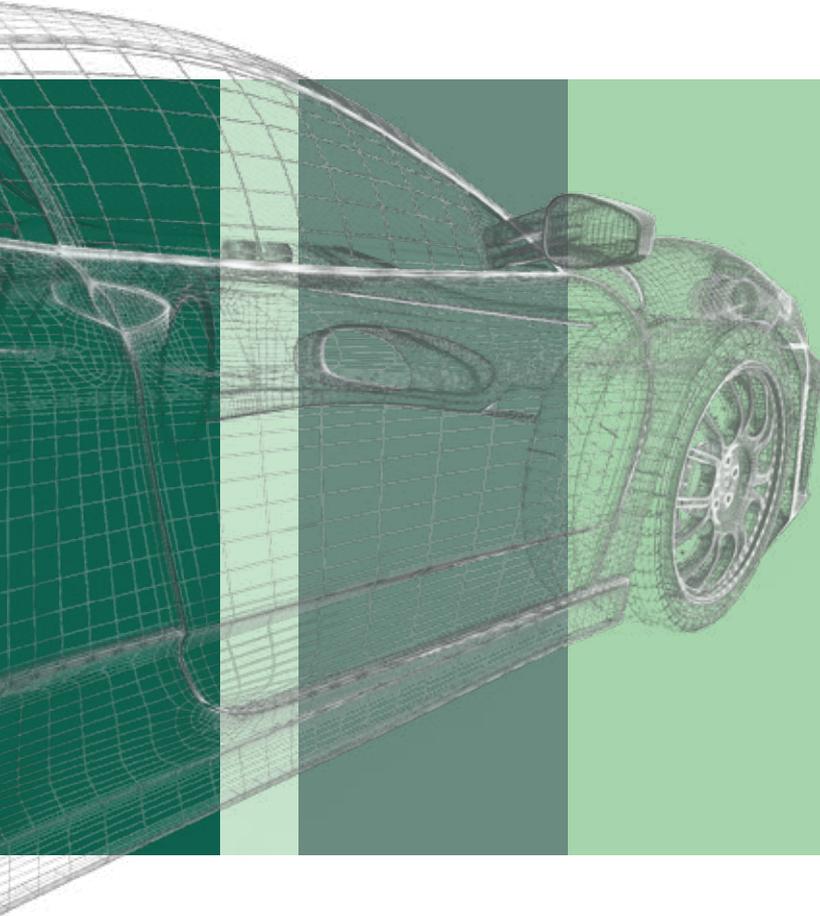




KONICA MINOLTA

# Spectrophotometer CM-M6

High Precision, Multi-Angle Spectrophotometer  
with 6 angles for Automotive Exteriors



Innovative “Double-Path” Optical System  
for stable measurements even on curved  
surfaces

Compact, lightweight vertical alignment for  
easy measurements in the assembly line

Small measurement area ( $\varnothing 6\text{mm}$ ), perfect  
for small surfaces

Giving Shape to Ideas

# Accurate measurements of Automotive exterior finishes in the Assembly Line

The CM-M6 is a compact and lightweight Multi-Angle Spectrophotometer using a patented “Double Path” optical system with outstanding performance on curved surfaces and thus perfect for measurements on the assembly line.

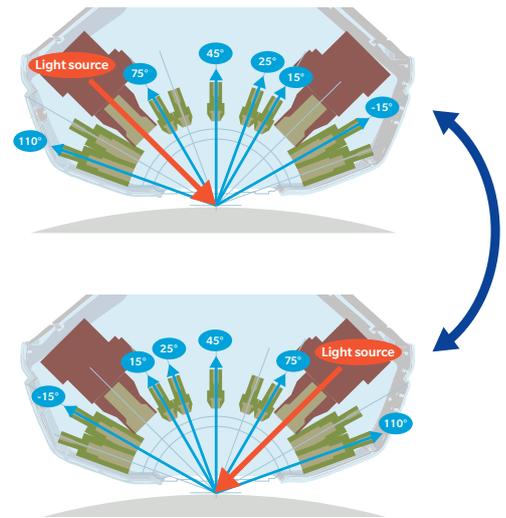
## → Multi-Angle measurements – 45° illumination and 6 viewing angles

### Double-path optical system

Illumination angle: 45°

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

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



## → Double-path optical system

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.

## → Compact, lightweight with vertical alignment

The compact body can be stably held with one or two hands. The CM-M6 offers features designated to measure automotive exteriors in the assembly line. A rubber cover to safeguard measurements objects from scratching and optional Bluetooth® wireless data communication with external devices.



## → Ø6mm measuring field for small surfaces

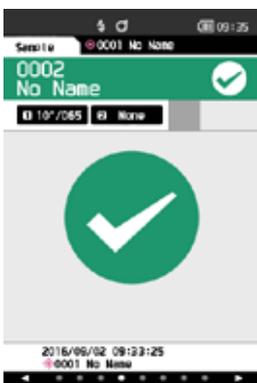
The measurement area is 6mm in diameter in order to measure small surfaces with best stability and impossible to measure with normal instruments.



Sample: 0001 No Name  
0001 No Name  
10°/285 El: None FF: 0.23  
15°  
L\* a\* b\*  
-15° 97.22 -0.28 -0.27  
15° 98.71 -0.12 -0.15  
25° 98.71 -0.08 -0.18  
45° 98.89 -0.02 0.11  
75° 98.49 -0.00 0.04  
135° 94.81 0.01 0.18  
2016/09/02 09:29:29  
0001

## → Colour Display

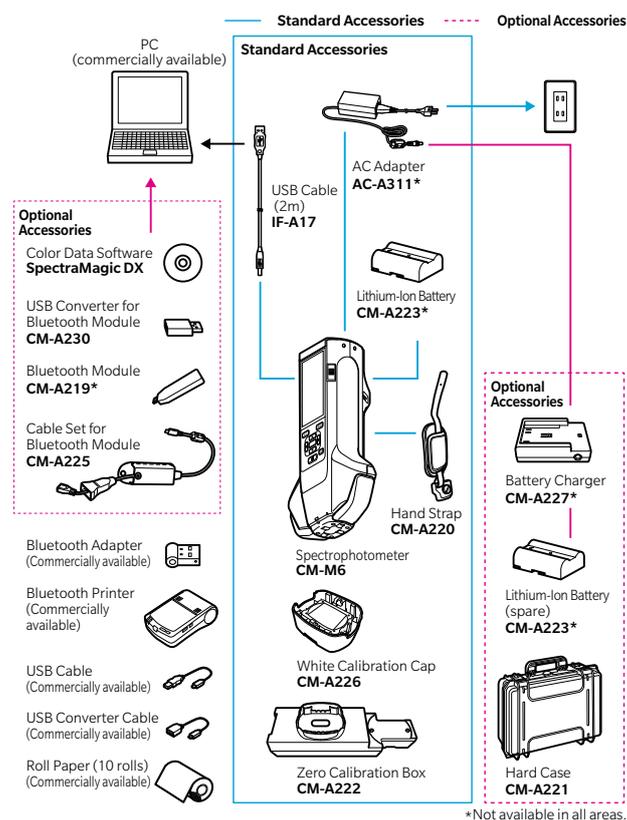
The CM-M6 has a built-in 3.5" colour LCD allowing measurement values to be evaluated numerically and graphically or just as PASS/FAIL message against a defined standard.



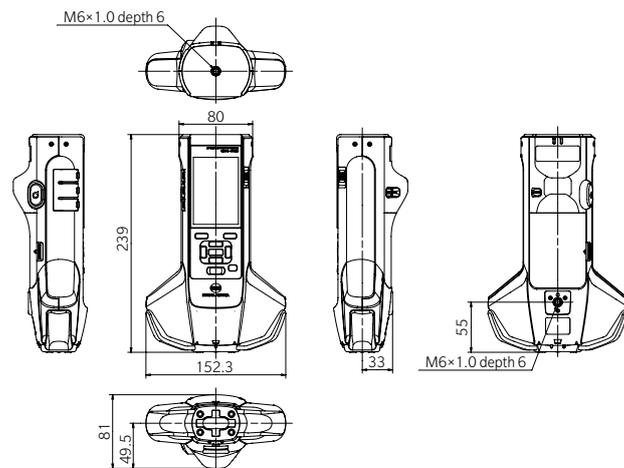
## Main specifications

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 $\Delta E^*ab$ 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, colour-difference values/graph, line graph (colorimetric/colour-difference values), pass/fail judgement
Colorimetric data	L*a*b*, L*C*h
Indexes	MI, FF value (Flop value)
Color-difference formula	$\Delta E^*ab$ (CIE 1976), $\Delta(L^*a^*b^*)$ , $\Delta(L^*C^*H^*)$ , CMC (l:c), $\Delta E^*94$ (CIE 1994), $\Delta E00$ (CIE DE2000), $\Delta E$ (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
Weight	Approx. 1.1 kg (including battery)

## System diagram



## Dimensions (Unit: mm)



### 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.

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