THE NEW LEADER

Konica Minolta's flagship model: High accuracy and repeatability even at low reflectance/transmittance
A high-accuracy, top-class model filled with Konica Minolta's advanced optical technology. Ideal for demanding customers with strict requirements for R&D, QC, and CCM applications.

An advanced spectrophotometer for reflectance and transmittance measurements of a broad range of subjects including pigments, dyes, plastic, textiles, paints, ceramics, etc.

Top-of-the-line model providing high accuracy and high reliability

Konica Minolta’s advanced optical, sensing, and signal-processing technology provide excellent repeatability. Strictly selected high-quality parts ensure long-term stability and reliability. Strict accuracy control traceable to national standards ensures high quality with high inter-instrument agreement.

1. Illumination/Viewing geometry conforms to CIE, ISO, ASTM, DIN, and JIS requirements for di:8°, de:8° (diffuse illumination/8° viewing) geometry for reflectance and to CIE, ASTM, DIN, and JIS requirements for transmittance.
2. Pulsed xenon arc light source provides high stability, long life, and excellent repeatability even on dark and high-chromaticity colors.
3. 6-inch integrating sphere has a powdered barium sulfate (BaSO₄) coating with superior optical characteristics.
4. Double-beam feedback system directly monitors the light emitted by the xenon lamp at the time of measurement and automatically compensates for changes in brightness or spectral characteristics to ensure high-accuracy measurements.

5. Polychromatic unit

A diffraction grating provides high-efficiency separation of light by wavelength, ensuring high repeatability even when measuring dark colors, and the silicon photodiode array sensor quickly converts the separated light into electrical currents. These elements are mounted on stainless steel with a low coefficient of thermal expansion to ensure long-term stability.

6. The optical systems for sample measurement and light-source monitoring are mounted on an aluminum alloy block for long-term stability.

* CM-3700A is computer-controlled. Software such as optional SpectraMagic NX required.

7. The UV cut filter can be adjusted in 100 steps for long-term stability. These elements are mounted on stainless steel with a low coefficient of thermal expansion to ensure long-term stability.

Additional Features of CM-3700A

- Long sample holder arm enables measurement at center of A4-size sample.
- Sample holder arm stays open when opened fully for easy positioning of thick samples.
- Frame around power switch prevents switching power off by mistake.
- USB communication interface for easy connection and high-speed communication.

Comprehensive measurement functions

Reflectance measurements

- Switchable between SCI and SCE measurements
- SCI (specular component included) measurements minimize the influence of surface conditions on measured values, making it suitable for CCM applications. SCE (specular component excluded) measurements correspond closely to professional visual evaluation.
- Selectable measurement areas
- Measurement areas of Ø25.4mm, Ø8mm, and 3x5mm (rectangular) can be selected according to the application.

Transmittance measurements

- Sideless transmittance chamber for unlimited sample length (Maximum thickness: Approx. 50 mm)
- di0°, de0° (diffuse illumination/0° viewing angle) geometry for spectral transmittance measurements of sheet samples such as glass, filters, etc. as well as cells containing liquid samples such as foods, cosmetics, etc.

Variable UV for measuring fluorescent samples

The UV cut filter can be adjusted in 1000 steps for measurements of samples containing optical whitening agents such as paper, pulp, etc.
Specifications

**Illumination/viewing system**
Reflectance: @d65, de65 (diffuse illumination/ viewing angle)
SCI (specular component included)/SCE (specular component excluded) switchable
Conforms to CIE No.15, ISO 7724-1, ASTM E 1164, DIN 5033

**Transmittance**
d65, de65 (diffuse illumination/viewing angle)
Conforms to CIE No.15, ASTM E 1164, DIN 5033 Teil 7 and JIS Z 8722 condition g standard

**Detector**
Silicon photodiode array with flat holographic grating

**Weight**
18 kg (39.7 lb.)

**Storage temperature/humidity range**
13 to 33°C, relative humidity 80% or less (at 33°C with no condensation)

**Power**
AC 100 to 240 V 50/60 Hz 25 VA (using included AC Adapter)

**Operation temperature/humidity range**
13 to 33°C, relative humidity 80% or less (at 33°C with no condensation)

**Storage temperature/humidity range**
0 to 40°C, relative humidity 80% or less (at 35°C with no condensation)

**Size (WxHxD)**
271 x 274 x 500 mm (10-1/16 x 10-3/4 x 19-11/16 in.)

**Weight**
18 kg (39.7 lb.)

*1 Operation temperature/humidity range of products for North America: 13 to 33°C, relative humidity 80% or less (at 31°C with no condensation)

**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.

![Safety Precautions](image)

**Worldwide sales network**

SpectraMagic NX (Optional) Supports Windows® 7/8/10

SpectraMagic NX enables you to perform comprehensive color inspection and analysis of incoming raw materials, in-process production, and outbound color-critical goods and materials in virtually any industry. With SpectraMagic NX you can insert digital images with measured data. Measure samples in any of 8 universally accepted color spaces. Select from 16 illuminants, and up to 40 indices to determine specific color and appearance properties, such as strength, brightness, haze, yellowness, opacity and whiteness. You can even configure up to 8 customized color equations. Results range from simple Pass/Fail to trend charts, histograms, color plots, and spectral graphs. SpectraMagic NX comes with predefined templates, or you can create your own templates. For illustrations and explanations to understanding color and color measurement technology, there is a link to Konica Minolta’s well-known and respected “Precise Color Communication”, as well as step by step navigation help. Available in 8 languages: English, French, German, Italian, Spanish, Japanese, Chinese (Simplified/Traditional), and Portuguese.

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