KONICA MINOLTA

SPECTROPHOTOMETER CM-3600d

Built for Precision, Priced for Economy

New Enhanced Performance Technology teams patented performance features with simplified design and advanced cost-reducing manufacturing techniques.

The result:

- A highly accurate, reliable, rugged spectrophotometer.
- Versatile enough for all colorimetric applications.
- Simplified operation.

And

- LOW PRICE

Technology

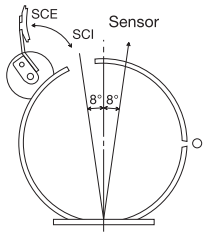
KONICA MINOLTA Innovative Optical System "World first" technology :

- Numerical Gloss Control measurement within a few seconds.
- Numerical UV Control for calibration and measurements.
- Soft-flash mode to avoid triplet adsorption in fluorescent materials.

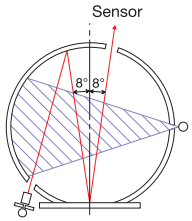
The essentials of imaging

e Technology
Optical System

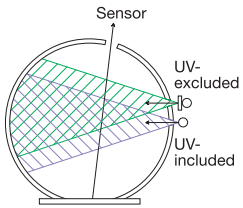
e Optical System technology.
bility, improved performance,
ffordable pricing.



Mechanical driven gloss trap



Numerical Gloss Control



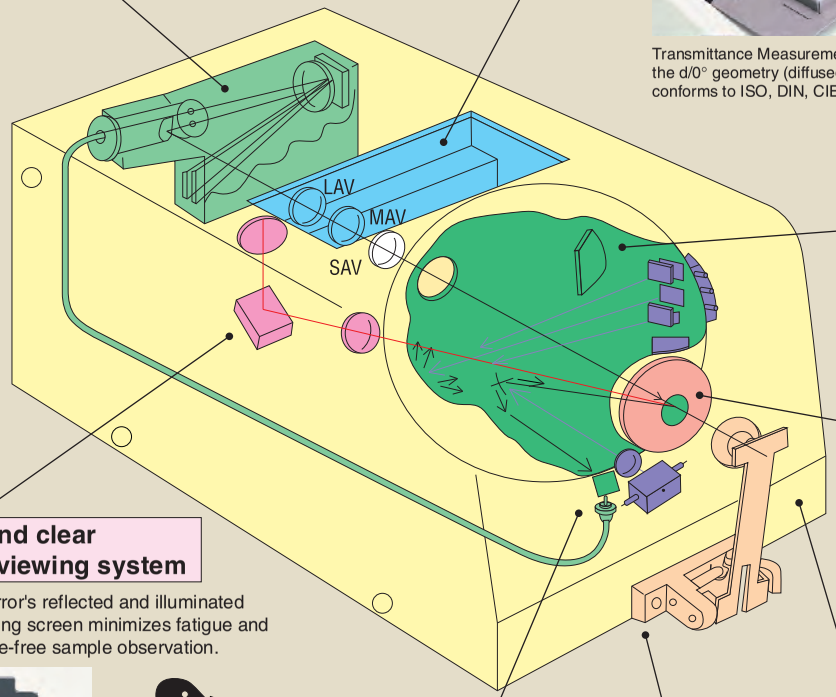
Numerical UV Control

nce

UV-included data

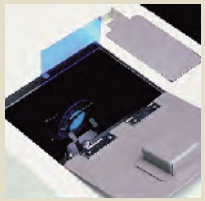
For high-accuracy color control
The newly designed Monolith Polychromator Unit

consists of a diffraction grating with a full wavelength range, 360-740 nm, at 10nm pitch, and 10nm half-band width, both for sample and reference light, and dual-channel sensor array.



Full range of application coverage

Whatever your sample looks like, with the CM-3600d you can measure it! Reflectance of opaque samples, Transmittance of transparent liquids or solids and Diffuse Transmittance of translucent materials such as plastics - the CM-3600d is truly versatile.



Transmittance Measurement-The CM-3600d employs the d/0° geometry (diffused lighting, 0° viewing), which conforms to ISO, DIN, CIE, and ASTM standards.

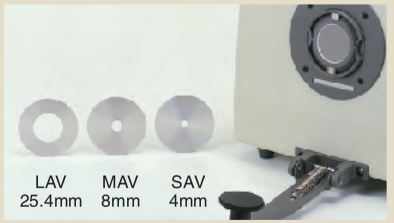
Reflectance Measurement-The CM-3600d employs d/8° geometry (diffused lighting, 8° from normal viewing) which conforms to JIS, ISO, DIN, CIE and ASTM standards.

Konica Minolta Innovative Optical System Technology

Konica Minolta's Innovative Optical System, including Numerical Gloss Control and Numerical UV Control, opens the way to unlimited application versatility at a price level never seen before.

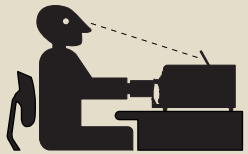
Multiple measurement area selection

To cover all kinds of samples, the CM-3600d gives you the choice among three aperture sizes: LAV 25.4mm, MAV 8mm and SAV 4mm with precise measurement spot adjustment by a motorized observing lens.



Bright and clear sample viewing system

The retro mirror's reflected and illuminated sample viewing screen minimizes fatigue and allows trouble-free sample observation.

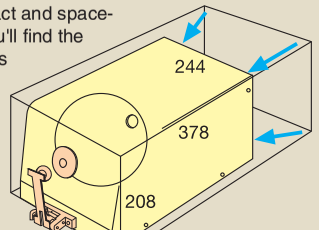


Designed to meet your highest ergonomic expectations

The compact and space-saving body as well as all functions of the CM-3600d have been designed to ensure easy and fatigue-free operation in daily use. The bright mirror sample viewing system, the sample holder for up to A4 size samples with full 90° lock down, and the versatile Transmittance chamber for liquid or

Compact but yet Powerful

Behind the compact and space-saving design, you'll find the skills of a top-class instrument with 6" large sphere and other functions so far only found in much larger and more expensive instruments.



- Precise inter-instrume
  All CM-3600d's meet

Versatility

- Full wavelength range
- Large (6") sphere; d/8
- Reflectance and trans
- Changeable measure
- View finder design for
- Compact and lightwei

Reliability

- High reliability design spectrophotometer

Spectra

SpectraMagic™ ***NX*** e
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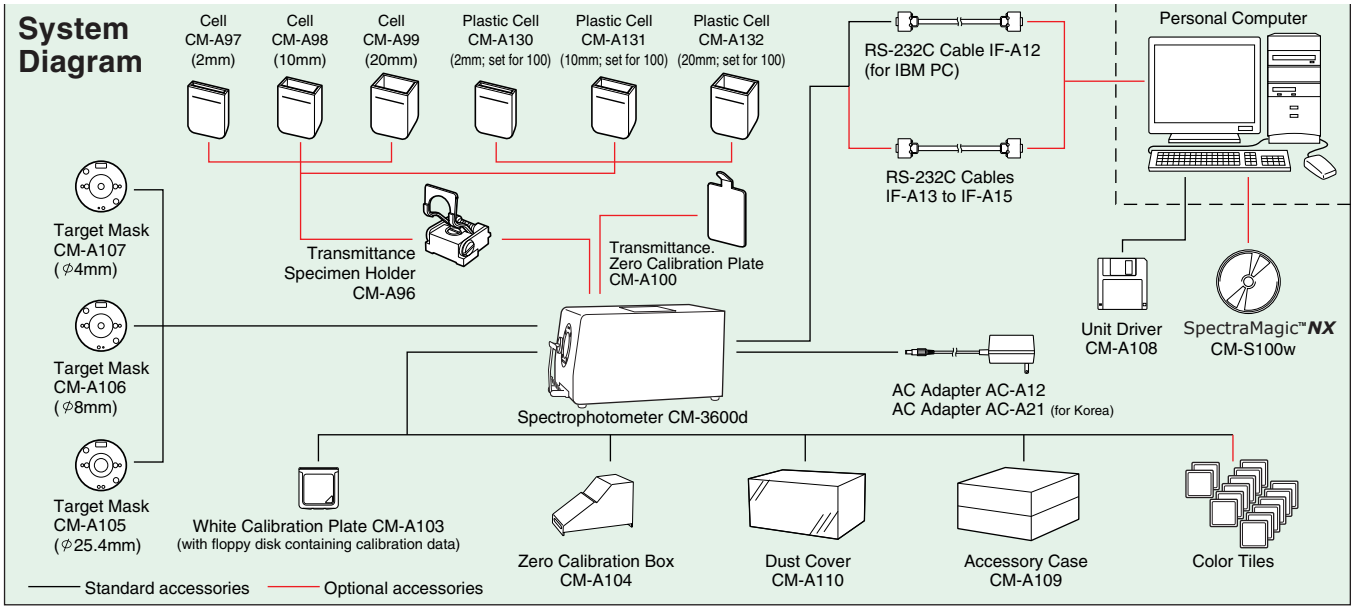
Dimensions

System Diagram



Specifications

Illumination/ observation system	Reflectance;d/8 (diffused illumination, 8-degree viewing), equipped with simultaneous measurement of SCI (specular component included) / SCE (specular component excluded) Conforms to CIE No.15,ISO7724/1,ASTME1164, DIN5033 Teil7 and JIS Z8722 condition C standard. Transmittance : d/0 (diffused illumination, 0-degree viewing) Conforms to CIE No.15, ASTME1164 and DIN5033 Teil7 standard.
Light-receiving element	Silicon photodiode array (dual 40 elements)
Spectral separation device	Diffraction grating
Wavelength range	360 to 740nm
Wavelength pitch	10nm
Half bandwidth	Approx.10nm
Reflectance range	0 to 200%; resolution: 0.01%
Sphere size	ø152mm
Light source	Pulsed xenon lamps (×4)
Measurement time	Approx. 1.5 seconds
Minimum interval between measurements	Approx. 4 seconds;when SCI/SCE measured
Measurement/ illumination area	LAV : ø25.4mm/ø30mm MAV: ø8mm/ø11mm (Selectable) SAV : ø4mm/ø7mm
Repeatability	Spectral reflectance: Standard deviation within 0.1% Colorimetric values: Standard deviation within ΔE*ab0.02
Inter instrument agreement	Mean ΔE*ab0.15 (LAV/SCI) Average for 12 BCRA Series II color tiles compared to values measured with master body.
Temperature dependence	Spectral reflectance: Within ±0.10%/°C Color difference: Within ΔE*ab 0.05/°C
UV adjustment	Instantaneous numerical adjustment
UV cut filter	400nm cutoff and 420nm cutoff
Transmittance chamber	Width: 133mm; depth: approx. 50mm; measurement dia.: approx. 17mm Transmission sample holder (Optional accessory): Sample holder; for both plate-shaped and liquid samples (removable)
Interface	RS-232C, D-SUB 9-pin (female) terminal
Power	AC120V/230V 50/60Hz (Using included AC adapter)
Operating temperature/ humidity range (*1)	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 33°C) with no condensation
Size (W x H x D)/weight	244 x 208 x 378 mm(9-5/8 x 8-3/16 x 14-7/8 inch),12 kg(26-7/16 lb.)
Standard accessories	White Calibration Plate,Target Mask (ø4mm) ,Target Mask (ø8mm) ,Target Mask (ø25.4mm) , Zero Calibration box, AC adapter, Dust Cover, Accessory Case, Unit Driver, RS-232C Cable (9-pin,2m)
Options	SpectraMagic™NX(software) ,Transmittance Specimen Holder, Cell (2mm) / (10mm) / (20mm), Transmittance Zero Calibration Plate, RS-232C Cable (IBM,PC/AT 5m) / (IBM,PS/2 2m) / (IBM,PS/2 5m)

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

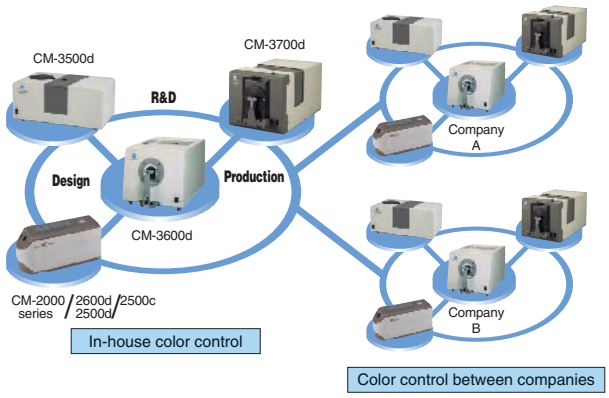
SAFETY PRECAUTIONS

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.

Network construction for color control either within an organization or between organizations

High inter-instrument agreement between the same Konica Minolta model and also among all CM models (benchtops and portables): CM-2000 series, CM-3000 series,
This inter-instrument agreement is ideal when multiple units will be used for color control either within an organization or between organizations.



KONICA MINOLTA SPECTROPHOTOMETER LINEUP

CM-3700d series	"State of the Art" Reference models
CM-3600d	Laboratory and Production modell
CM-3500d	Unique Top Port bench-top model
CM-2600d/2500d/2500c	Top class accuracy portables

Certificate No : YKA 0937154
Registration Date : March 3, 1995

Certificate No : JQA-E-80027
Registration Date : March 12, 1997

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