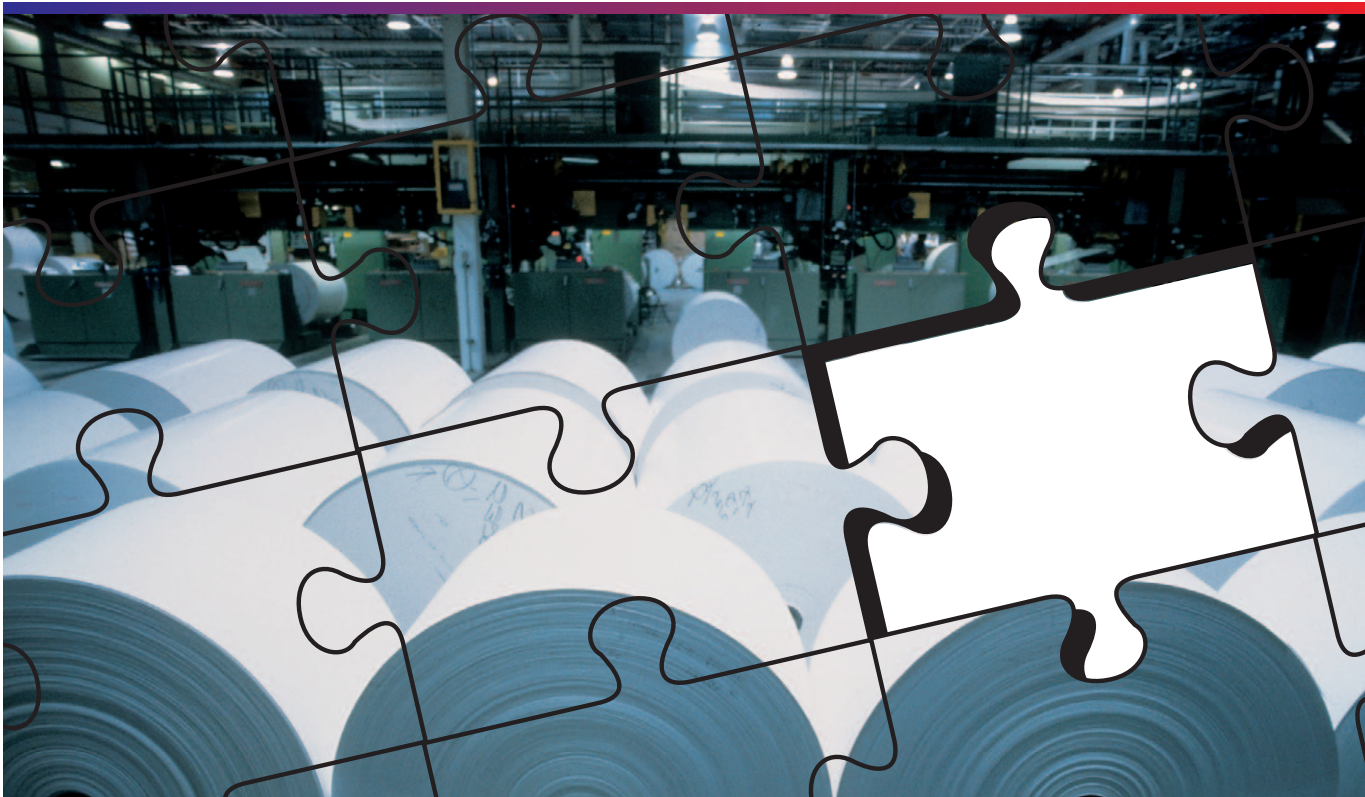




KONICA MINOLTA

# SPECTROPHOTOMETER CM-3630



The missing link to total quality  
Designed to measure the  
paper industries' needs.

Introducing Konica Minolta's high-efficiency solution  
for precise whiteness and color measurement



Exactly what you've  
been waiting for:  
Introducing our state-of-the-  
art Spectrophotometer  
CM-3630 for the edge in  
paper quality control.

Highly competitive markets, such as the paper, pulp and cellulose industry, require a commitment to top quality throughout. With Konica Minolta's state-of-the-art Spectrophotometer CM-3630 and the appropriate software you can precisely monitor production at all times..

Designed to keep an eye on the optical properties of pulp and paper during the complete production process, the optical system and geometry of the CM-3630 can measure brightness, opacity, fluorescence, color, whiteness and tint.



Finally a professional solution to ensure uncompromised quality



Your professional quality agent right on the production line: Uncompromised quality thanks to perfect adherence to ISO standards.

## Data compatibility

The CM-3630's numerical UV control system combined with its user calibration option allows easy adjustment of the instrument parameters to your current measurement system. Such precision guarantees that your brightness measurements will perfectly correspond with the data you've collected over the years.

## Quick Opacity Measurement

Measuring opacity can be done in a matter of seconds: Simply position the opacity jig on the white side and measure. Then rotate the opacity jig to the black side, measure again – that's it!



## ISO standards

The CM-3630 ensures adherence to ISO optical standards and a wide array of national standards worldwide. It provides exact conformity with ISO standards 2469 and 2470 for measuring ISO brightness. With software, brightness, opacity, whiteness and yellowness indices can be calculated and displayed in accordance with several international and national standards such as: ISO, SCAN, DIN, TAPPI, CPPA, and AFNOR.

## Whiteness Measurements

To get correct measurement readings of paper with Optical Brightening Agents, the amount of UV radiation must be controlled and adjusted. Several methods are available for adjusting UV radiation. To prevent the triplet effect exhibited by some special Optical Brightening Agents, the CM-3630 allows you to switch the light source between full power and soft flash mode.


## Patented\* Numerical UV Control

Numerical UV Control (NUVC) makes calibration and adjustments to whiteness and tint a swift and quick procedure. In fact, the whole process is much faster than current methods used in conventional instruments. Since it's all done digitally, exact and reliable results are assured. And with the total absence of moving parts in the spectrophotometer's optical system, it is absolutely robust and completely maintenance-free! With patented NUVC, Konica Minolta has turned the once time-consuming and error-prone calibration process into a quick, accurate and reliable procedure.

\*US Patent No 5,636,015.

# Technical Data

Model	CM-3630
Illumination/viewing system	Reflectance: d:0° (diffused illumination, 0-degree viewing) Conforms to ISO 2469, JIS P8148, DIN 53145-1 and DIN 53145-2 standards.
Light-receiving element	Silicon photodiode array (dual 40 elements)
Spectral separation device	Diffraction grating
Wavelength range	360nm to 740nm
Wavelength pitch	10nm
Reflectance range	0 to 200%; resolution: 0.01%
Light source	Pulsed xenon lamps (x 3)
Measurement time	Approx. 1.5 seconds (for measurements of fluorescent colors, at 9600 bps)
Minimum measurement interval	Approx. 4 seconds when reflectance measured; approx. 5 seconds when fluorescent color is measured
Measurement/illumination area	ø30 mm/ø34 mm
Inter-instrument agreement	Mean $\Delta E^*ab$ 0.2 based on 12 BCRA Series II color titels compared to values measured with master body
Repeatability	Spectral reflectance: Standard deviation within 0.1% Colorimetric values: Standard deviation within $\Delta E^*ab$ 0.02 (condition; white calibration plate measured 30 times at 10-second intervals)
Temperature drift	Spectral reflectance: Within +/- 0.10%/°C Color difference: Within $\Delta E^*ab$ 0.05/°C
UV adjustment	Instantaneous numerical adjustment
Control method	Directly connected to a computer
Interface	RS-232C format
Power	100-240V AC, 50-60Hz 25W AC (with a dedicated AC adapter)
Size (WxHxD)	300 x 585 x 315 mm
Weight	15.5 Kg
Operation temperature/humidity range	13 to 33°C, relative humidity 80% or less (at 33°C) with no condensation * Operating temperature/humidity range of products for North America : 13 to 33°C, relative humidity 80% or less (at 31°C) with no condensation
Standard accessories	White Calibration Plate CM-A133, Zero calibration box CM-A119, AC Adapter, RS-232C cable IF-A12, Accessory Case CM-A209, Dust Cover CM-A118, Unit Driver CM-A108
Optional accessories	Color Data Software SpectraMagic NX CM-S100w, Opacity jig CM-A134, RS-232C cable IF-A13



**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.

● The specifications and appearance shown herein are subject to change without notice.

ISO Certifications of KONICA MINOLTA, Inc., Sakai Site



JQA-QMA15888  
Design, development, manufacture/  
manufacturing management, calibration, and  
service of measuring instruments



JQA-E-80027  
Design, development,  
manufacture, service and sales  
of measuring instruments

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