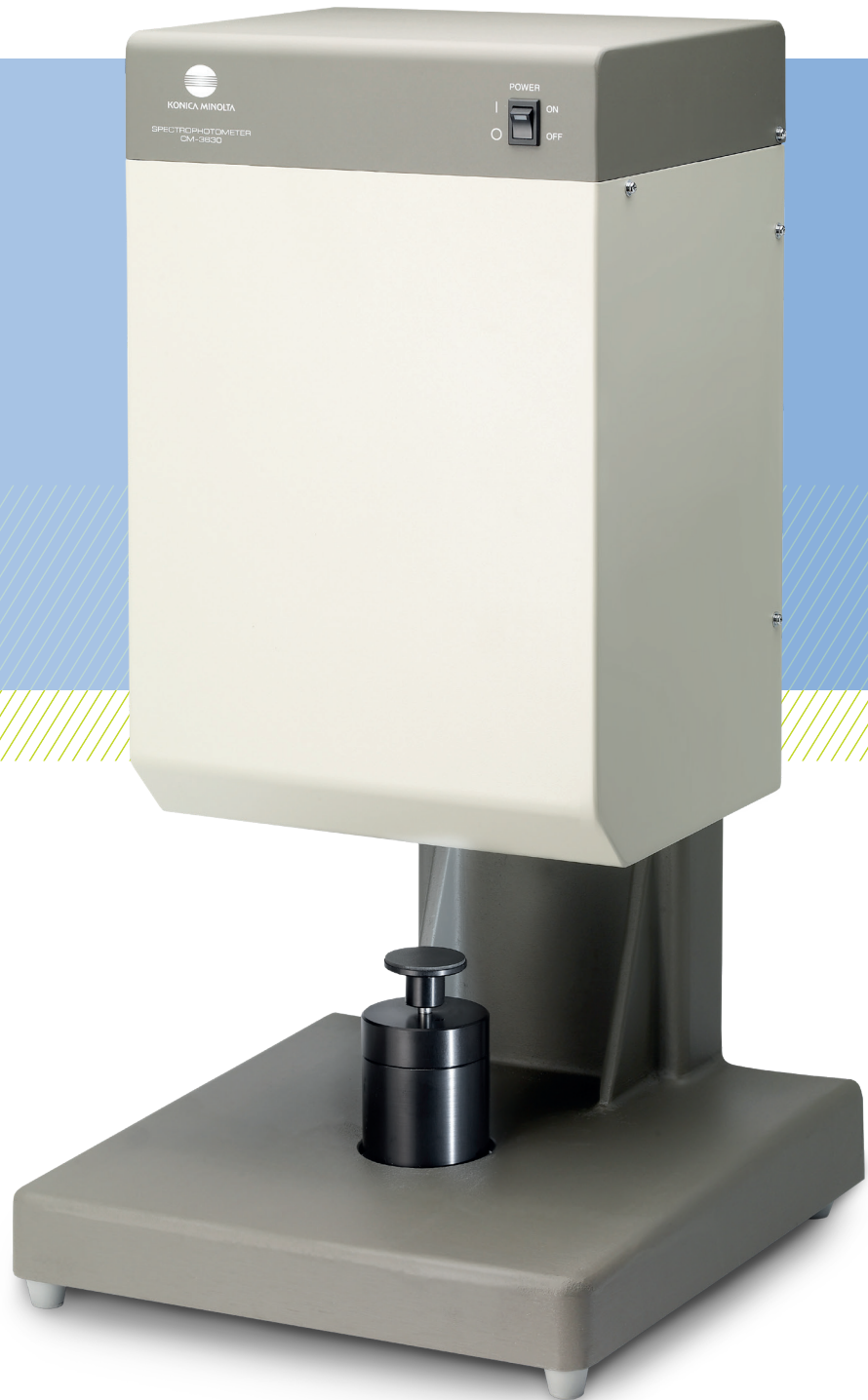




KONICA MINOLTA

Spectrophotometer **CM-3630**

Made to measure the paper industry's needs.
ISO 2469/2470 compliant solution.



**RI
SE**

Research Institutes
of Sweden

Used by RISE Invention
as reference instrument for measuring white paper standards.

Giving Shape to Ideas

Finally a professional solution to ensure uncompromised quality

Exactly what you've been waiting for: Introducing our state-of-the-art Spectrophotometer CM-3630 and PaperManager software for the edge in 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 accompanying PaperManager 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 CM-3630 measures brightness, opacity, fluorescence, colour, whiteness and tint. To meet your exacting standards, PaperManager software has been developed in close cooperation with the paper, pulp and cellulose industry.

→ 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 PaperManager software, brightness, opacity, whiteness and yellowness indices are 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 readings of paper with Optical Brightening Agents, the amount of UV radiation must be controlled and adjusted. PaperManager offers several methods to adjust the 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.

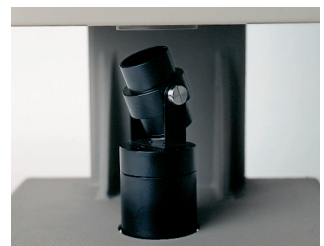
Your professional quality agent right on the production line

→ Measuring Colour Difference

In addition to production control and whiteness measurement, PaperManager also provides a Colour Difference module, which displays the measurement readings as numerical data, spectral reflection curves or colour space plots.

→ 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!



→ 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.

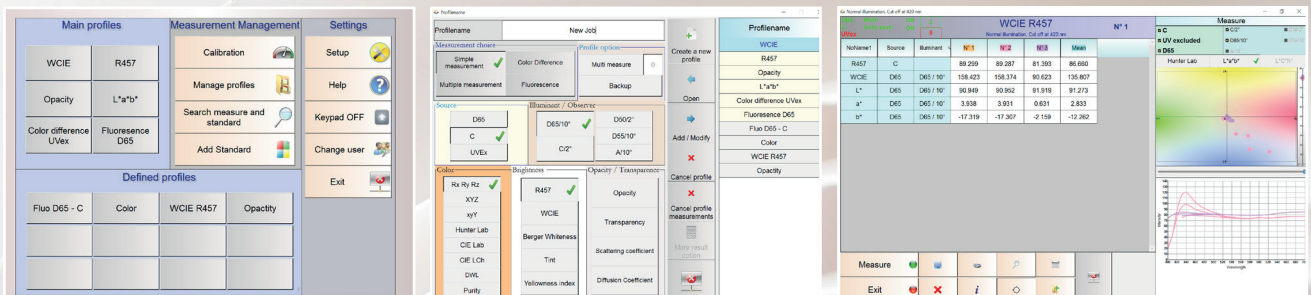
→ Data compatibility

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.

Peace of mind for the pulp and paper industry

→ Production Control with PaperManager

PaperManager makes routine production control much easier, faster, more comfortable and reliable - in short: more professional. No more confusion by mixing production control and general QC tests as in conventional multi-purpose software. PaperManager is all you need to control your production line. Workflows and measurement parameters can be setup by the supervisor for quick selection by the operator.



Six main and 12 subprofiles can be chosen directly from the main screen. Job setup is made in an easy-to-understand menu.

Using predefined profiles, the operator gets valuable assistance in performing the most commonly used measurement routines without the need to set them up each time - the result is increased productivity with fewer errors.

For easy production usage, PaperManager supports Touchscreen usage and user profile setup as well as remote support using embedded TeamViewer Software. Measured data can be stored in the connected database and exported either as standard export formats (e.g. xls) or as definable data export via XML to third party systems.

Modell	Spectrophotometer CM-3630
Measuring geometry	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	10 nm
Light source	Pulsed xenon lamps (x 3)
Measurement time	Approx. 1.5 seconds (for measurements of fluorescent colours, at 9600 bps)
Minimum interval between measurements	Approx. 4 seconds
Illumination/measurement area	34mm/30mm
Inter instrument agreement	Mean ΔE^*ab 0.2 based on 12BCRA Series II colour tiles compared to values measured with master body
Repeatability	Spectral reflectance: Standard deviation within 0.1% Colourimetric values: Standard deviation within ΔE^*ab 0.02 (condition; white calibration plate measured 30 times at 10-second intervals)
Temperature drift	Spectral reflectance: Within +/- 0.10%/°C Colour difference: Within ΔE^*ab 0.05/°C
UV adjustment	Instantaneous numerical adjustment
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
Operating temperature/humidity range	13 to 33°C, relative humidity 80% or less (at 33°C) with no condensation *1
Standard accessories	White Calibration Plate CM-A-133, 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	Colour Data Software PaperManager for CM-3630, Opacity Jig CM-A134, RS-232C Cable IF-A13

*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

< Dimensions (Units mm) >

< System Diagram >

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.

- Displays shown are for illustration purposes only.
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