

Spectrophotometer CM-3630 PaperControl Software



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

Introducing Konica Minolta's high-efficiency ISO solution

for precise whiteness and color measurement



Exactly what you've been waiting for:

Introducing our state-of-theart Spectrophotometer CM-3630 and PaperControl 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 PaperControl 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, color, whiteness and tint. To meet your exacting standards, PaperControl software has been developed in close cooperation with the paper, pulp and cellulose industry. Finally a professional solution to ensure uncompromised quality



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 PaperControl 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 measurement readings of paper with Optical Brightening Agents, the amount of UV radiation must be controlled and adjusted. PaperControl 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: Uncompromised quality thanks to advanced PaperControl software and perfect adherence to ISO standards.

Measuring Color Difference

In addition to production control and whiteness measurement, PaperControl also provides a Color Difference module, which displays the measurement readings as numerical data, spectral reflection curves or color 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

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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.

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.

*US Patent No 5,636,015



Technical Data

Model

Illumination/viewing system

Light-receiving element Spectral separation device Wavelength range Wavelength pitch Reflectance range Light source Measurement time Minimum interval between measurements Measurement/illumination area Inter instrument agreement Repeatability Temperature drift UV adjustment Control method Interface Power Size (WxHxD) Weight Operating temperature/humidity range Standard accessories

Konica Minolta - a synonym for reliability and expertise throughout the paper industry

Konica Minolta manufactures its advanced measuring instruments with meticulous care. Strict quality controls ensure that each product rigorously conforms with exacting industry standards. For over 60 years, Konica Minolta has offered innovative, affordable solutions that deliver solid value through their reliability, durability, accuracy, precision and repeatable performance.

CM-3630

Reflectance:d/0 (diffused illumination, 0-degree viewing) Conforms to ISO 2469, JIS P8148, DIN 53145-1 and DIN 53145-2 standards. Silicon photodiode array (dual 40 elements) Diffraction grating 360nm to 740nm 10nm 0 to 200%; resolution: 0.01% Pulsed xenon lamps (x 3) Approx. 1.5 seconds (for measurements of fluorescent colors, at 9600 bps) Approx. 4 seconds; when reflectance measured, approx. 5 seconds; when fluorescent color 30mm/34mm Mean ΔE^*ab 0.2 based on 12BCRA Series II color titels compared to values measured with master body Spectral reflectance: Standard deviation within 0.1% Colorimetric values: Standard deviation within ΔE^*ab 0.02 (condition; white calibration plate measured 30 times at 10-second intervals) Spectral reflectance: Within +/- 0.10%/°C Color difference: Within ΔE^*ab 0.05/°C Instantaneous numerical adjustment Directly connected to a computer RS-232C format 100-240V AC, 50-60Hz 25W AC (with a dedicated AC adapter) 300 x 585 x 315 mm 15.5 Kg 13 to 33°C, relative humidity 80% or less (at 30°C) with no condensation White calibration plate CM-A 133, Zero calibration box CM-A119, AC adapter AC-A12, RS-232C cable IF-A12, Accessory Case CM-A117, Dust Cover CM-A118, Unit Driver CM-A108

Color Data Software PaperControl for CM-3630, Opacity jig CM-A134, RS-232C cable IF-A10, IF-A11, IF-A13, IF-A14, IF-A15

Optional accessories



Production Control Module

PaperControl 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. PaperControl is all you need to control your production line. All possible measurement parameter settings are already preprogrammed – for quick selection by the supervisor.

The production control module allows programming and labelling for a large number of jobs. Up to 9 different processes can be displayed in easy-to-understand menus. Thus, the operator gets valuable assistance in performing the most commonly used measurement routines. The end result is overall increased productivity.

Peace of mind for the pulp and paper industry

Swift performance, reliable data - everything under control

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The measurement data can be transferred to the production control process system. This ensures that specific test runs are being done under the same conditions – providing consistent, reliable results. And to make it even easier, all settings and measurements of this Windows-based software (Windows®95, Windows®98, and Windows NT®4.0) are keyboard-controlled.

Automatic calibration

Calibration is performed automatically for every conceivable combination of measurements in a few seconds. This valuable feature saves time and ensures reliable measurement data when new routines or tests are selected.

Windows® is a registered trademark of Microsoft Corporation, USA.



SAFETY PRECAUTIONS

To ensure correct use of the instrument, please adhere to the following.



 Before using the instrument, be sure to read the instruction manual.
Always use the specified power. Use of inappropriate power may result in afire or electric shock.

KONICA MINOLTA SENSING, INC. Minolta Corporation / ISD Minolta Canada Inc. Minolta Europe GmbH Minolta France S.A. Minolta UK Limited Minolta Austria Ges.m.b.H. Minolta Camera Benelux B.V. Minolta Italia s. r. I Minolta Italia s. r. I Minolta Svenska AB Minolta Hong Kong Limited Shanghai Office Minolta Singapore (Pte) Ltd. KONICA MINOLTA SENSING, INC. Seoul Office



The manufacturing center of Konica Minolta Sensing Inc. (Location: Aichi Pref., Japan) was approved by the British certification organization Lloyd's Register Quality Assurance for certification under the ISO 9001: 1994 international quality management system standards on March 3, 1995. Since its establishment in 1990, the center has carried out the development and production of precision instruments and associated application software for the measurement of color, light, and shape. Certification was awarded to the center's quality management system, including design,

certification was awarded to the certifier's quality management system, including design manufacturer, management of manufacture, calibration and servicing.Certification was carried over to the ISO 9001: 2000 standards in February, 2003.

3-91, Daisennishimachi, Sakai.Osaka 590-8551, Japan

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