Bluetooth Spectrodensitometer - High Accuracy Print Density Colour Meter - 45/0 - 400-700 nm

Model **MSSP-CLD505SWISS** | Brand **Master Science**





The Master Science Bluetooth Spectrodensitometer is the high-accuracy version of the hand-held 45/0 densitometer for print quality control. It measures reflectance spectra, CMYK density, overprint and Lab values under the M0, M1, M2 and M3 conditions of ISO 13655.

KEY HIGHLIGHTS

- Wireless data transfer
- Tighter repeatability
- More than density
- Large on-board log
- Full working day

AT A GLANCE

400 to 700 nm	10 nm / 10 nm
WAVELENGTH RANGE	WAVELENGTH PITCH / HALF BANDWIDTH

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

Scan to view online

Overview

Compared with the basic model it adds Bluetooth, density scanning, more colour spaces and difference formulas, whiteness, yellowness, metamerism and opacity indices, a longer illuminant list and memory for 20,000 results.

Key Benefits

Wireless data transfer
the Master Science Bluetooth Spectrodensitometer sends results over Bluetooth 4.0.

Tighter repeatability
chromaticity within ΔE*ab 0.03.

More than density
whiteness, yellowness, metamerism and opacity.

Large on-board log
20,000 results.

Full working day
5000 measurements within 8 hours on battery.

The basic version is the Master Science grating spectrodensitometer.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSSP-CLD505SWISS
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Measurement Geometry	45/0 (45° ring illumination, 0° viewing); ISO 5-4, CIE No.15
Measurement Conditions	ISO 13655 M0, M1, M2, M3
Density Standards	ISO Status A, E, I, T
Density Indices	Density, density difference, dot area, dot gain, overprint, print characteristics, print contrast, hue error, grey scale, density scanning
Measurement Aperture	One aperture: Φ2, Φ4 or Φ8 mm
Colour Spaces	CIE LAB, XYZ, Yxy, LCh, CIE LUV, Hunter LAB
Colour Difference Formulas	ΔE*ab, ΔE*94, ΔE*00, ΔE*uv, ΔE*cmc (2:1), ΔE*cmc (1:1), ΔE (Hunter)
Other Indices	Whiteness (ASTM E313, CIE/ISO, AATCC, Hunter), yellowness (ASTM D1925, ASTM E313), metamerism index, opacity
Observer Angle	2° / 10°
Illuminants	A, C, D50, D55, D65, D75, F1 to F12
Measurement Time	About 1.5 s
Repeatability	Density within 0.01 D; chromaticity within ΔE*ab 0.03 (except M3)
Inter-instrument Error	Within ΔE*ab 0.18 (except M3)
Measurement Mode	Single; average of 2 to 99
Working Environment	0 to 40 °C; 0 to 85% RH, non-condensing; altitude below 2000 m
Power	Li-ion battery, 5000 measurements within 8 hours

OPTICAL PERFORMANCE

Light Source	Combined LED and UV light
Spectral Device	Concave grating
Detector	256-element dual-array CMOS image sensor
Wavelength Range	**400 to 700 nm**
Wavelength Pitch / Half Bandwidth	**10 nm / 10 nm**
Light Source Life	5 years, more than 3 million measurements

DISPLAY & DATA

Display	3.5-inch TFT colour LCD, capacitive touch
Interface	USB, Bluetooth 4.0
Data Memory	20,000 records
Memory filling up on long jobs	20,000-record storage.

DIMENSIONS & WEIGHT

Size (L×W×H)	184 × 77 × 105 mm
Weight	About 600 g

COMMON PROBLEMS AND HOW THIS INSTRUMENT HELPS

Common Problems and How This Instrument Helps	How the Master Science Bluetooth Spectrodensitometer helps print quality control:
Cables at the press console	Bluetooth connection.
Colour disputes between sites	inter-instrument error within ΔE*ab 0.18.
Missing indices for paper and substrates	whiteness, yellowness and opacity built in.

The Master Science Bluetooth Spectrodensitometer is used in

Ink printing
density, dot gain and overprint control

Film processing

Textile printing and dyeing

Plastics and electronics colour control

Optics

- 45/0 geometry
- Combined LED sources including UV
- Concave grating with CMOS array sensor

Operation

- 3.5-inch capacitive touch screen
- Selectable 2, 4 or 8 mm aperture
- Ergonomic hand-held body

Data

- USB and Bluetooth communication
- PC software with extended functions

Standard Accessories Included

- Power adapter
- USB cable
- Built-in Li-ion battery
- User manual
- Software
- White and black calibration board
- Protective cover
- Polarisation filter box
- Locating plate

Optional Accessories

- Micro printer