Grating Spectrodensitometer - Portable Print Density and Colour Meter - 45/0 Geometry - 400-700 nm

Model **MSSP-CLD501SWISS** | Brand **Master Science**









The Master Science Grating Spectrodensitometer is a hand-held instrument that reads reflectance spectra, CMYK density and Lab colour values from printed samples. It uses 45° ring illumination with 0° viewing and a concave grating over 400 to 700 nm.

KEY HIGHLIGHTS

- Density and colour in one tool
- A full shift on one charge
- Agreement between units
- Fits the sample
- Comfortable in the hand

AT A GLANCE

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

Request a Quotation
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Overview

It is aimed at process and quality control in printing plants, where optical density and dot gain must be checked on press sheets, and also serves film processing, textile printing and dyeing, and plastics and electronics.

Key Benefits

Density and colour in one tool
the Master Science Grating Spectrodensitometer reports CMYK density and Lab values.

A full shift on one charge
5000 measurements in 8 hours.

Agreement between units
inter-instrument error within ΔE*ab 0.2.

Fits the sample
apertures of 2, 4 or 8 mm.

Comfortable in the hand
ergonomic 600 g body.

For general colour measurement, see the Master Science portable colorimeter.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSSP-CLD501SWISS
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Model Number	MSSP-CLD501SWISS
SKU	MSSP-CLD501SWISS
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 and greyness
Measurement Aperture	One aperture: Φ2, Φ4 or Φ8 mm
Colour Spaces	CIE LAB, XYZ, Yxy, LCh
Colour Difference Formulas	ΔE*ab, ΔE*94, ΔE*00
Observer Angle	2° / 10°
Illuminants	A, C, D50, D55, D65, D75, F2, F7, F11, F12
Measurement Time	About 1.5 s
Repeatability	Density within 0.01 D; chromaticity within ΔE*ab 0.04 (except M3)
Inter-instrument Error	Within ΔE*ab 0.2 (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
Data Memory	10,000 records
Languages	English, Simplified Chinese, Traditional Chinese

DIMENSIONS & WEIGHT

Size (L×W×H)	184 × 77 × 105 mm
Weight	About 600 g
Package Dimensions / Gross Weight	360 × 170 × 320 mm / 3 kg

COMMON PROBLEMS AND HOW THIS INSTRUMENT HELPS

Common Problems and How This Instrument Helps	How the Master Science Grating Spectrodensitometer helps on the press floor:
Separate densitometer and colour meter	both functions in one device.
Jobs specified under different measurement conditions	M0 to M3 modes available.
Readings that differ between presses	low inter-instrument error.
Small colour patches	2 mm aperture option.

The Master Science Grating Spectrodensitometer is used in

Ink printing
optical density and dot gain control

Film processing

Textile printing and dyeing

Plastics and electronics colour control

Optics

- Combined long-life LED sources including UV
- Concave grating
- Polarisation filter for M3 measurements

Operation

- 3.5-inch capacitive touch screen
- Two standard observer angles
- Multiple illuminants and colour systems

Data

- Storage for over 10,000 results
- USB connection
- 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