Colo Science
Laboratory & Scientific Equipment

COLO.SCIENCE · TECHNICAL SPECIFICATION

PORTABLE 45/0 SPECTROPHOTOMETER

SC800

Portable Spectrophotometer · 45/0 · 400–700 nm · Ø8 mm · 3.5" touch screen · battery powered

SC800 Portable Spectrophotometer measures colour and colour difference the way the eye sees it — with 45° ring illumination and 0° viewing, the geometry for visual colour assessment of paints, inks, printed matter, plastics and coated surfaces. A full 400–700 nm reflectance spectrum, two observers and a 3.5" touch screen give laboratory colour data at the line, in the warehouse or in the field. The general-purpose model for paints, inks, plastics, textiles, paper and food — wherever the result has to agree with visual assessment.

45/0 ring | 400–700 nm · 10 nm | Ø8 mm aperture | 2° / 10° observer | ΔE*ab 0.04 repeatability | 3.5" touch screen | USB | Li-ion battery

Document type: **Technical Specification Sheet**
Product: **SC800 Portable Spectrophotometer**
Format: Print layout · A4 landscape

SC800 product page | Spectroscopy & Color — overview | Spectroscopy & Color catalogue | Request quote

GEOMETRY	SPECTRUM
45/0 ring · Ø8 mm	400–700 nm · 10 nm
REPEATABILITY	**INTER-INSTRUMENT**
ΔE*ab 0.04	ΔE*ab 0.2



SC800 · portable 45/0 spectrophotometer with touch screen

MODEL	ADDRESS / HQ	CONTACT
SC800	Polje ob Sotli 4 SI-3255, Slovenia	sales@colo.si +386 70 713 437

SC800 · product overview

Portable 45/0 colour measurement for laboratory, production and goods receipt

CORE TECHNOLOGY

45/0 geometry with ring illumination — matches visual assessment; the ring makes the result independent of the orientation of textured or striped samples.

Full reflectance spectrum 400–700 nm in 10 nm steps, measured by a silicon photodiode array with a long-life combined LED light source.

Two observers (2° and 10°) and 13 illuminants for colour checks under daylight, incandescent and shop lighting.

Ø8 mm measuring aperture for small parts, prints and patterns.

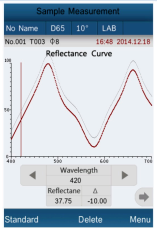
Standard and sample modes with tolerances: measure the master once, then every sample shows ΔE, pass/fail and the direction of the colour offset.

3.5" capacitive touch screen, inclined at 15° so the operator reads results naturally while holding the instrument.

1 000 standards, 15 000 samples stored in the instrument; standards can also be entered manually from a specification.

USB connection to the PC colour management software for reports, colour plots and extended evaluation.

PRODUCT HIGHLIGHTS



Spectral curve on screen
Reflectance curve 400–700 nm with wavelength cursor — sample and standard compared on the instrument.



Universal test component
Optional bench station for liquids, pastes, powders and granules.



Powders and granules
Measured in the closed chamber of the universal test component.



PC software
Standards, tolerances, trends and reports on the PC; data transfer by USB.

APPLICATIONS



Paints & inks



Plastics



Leather & textiles



Automotive parts



Food



Laboratories & QC

OBSERVERS	COLOUR SPACES	MEASURING INTERVAL	BATTERY
2° and 10° · 13 illuminants	CIE Lab, XYZ, Yxy, LCh, LUV	1.5 s	5 000 measurements in 8 h

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SC800 · technical parameters

45/0 · 400–700 nm · Ø8 mm · 2°/10° observer

TECHNICAL PARAMETERS

Optical geometry	45/0 (45° ring illumination, 0° vertical viewing)
Standards	CIE No.15; 45/0 geometry in line with CIE, ISO, ASTM and DIN
Light source	Combined LED light source
Sensor	Silicon photodiode array
Wavelength range	400–700 nm
Wavelength interval	10 nm
Measuring aperture	Ø8 mm
Colour spaces	CIE Lab, XYZ, Yxy, LCh, CIE LUV
Colour difference	ΔE*ab, ΔE*94, ΔE*cmc (2:1), ΔE*cmc (1:1), ΔE*00, ΔE (Hunter)
Colorimetric indices	WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM E313), metamerism index, colour strength, staining, colour fastness
Observer	2° and 10°
Illuminants	D65, A, C, D50, D55, D75, F2, F6, F7, F8, F10, F11, F12

Displayed data	Spectral values and curve, colorimetric values, colour difference values and graph, pass/fail, colour offset, colour simulation
Minimum interval between measurements	1.5 s
Repeatability	Spectral reflectance: s.d. within 0.1 % (400–700 nm: within 0.2 %) Colorimetric: s.d. within ΔE*ab 0.04 (white tile, 30 measurements at 5 s intervals)
Inter-instrument agreement	Within ΔE*ab 0.2 (average of 12 BCRA Series II tiles)
Display	3.5" TFT colour LCD, capacitive touch screen
Interface	USB
Data storage	1 000 standards, 15 000 samples
Power supply	Li-ion battery, 5 000 measurements within 8 hours
Light source life	5 years, more than 1.6 million measurements
Dimensions (L × W × H)	90 × 77 × 230 mm
Weight	approx. 600 g
Environment	Operation 0–40 °C, below 85 % RH (non-condensing); storage −20–50 °C

SC800 · accessories and series

Standard delivery, optional components and the SC800 / SC808 models at a glance

ACCESSORIES



Universal test component with sample dishes

OPTIONAL



Measuring chamber with light-tight cover

OPTIONAL



Powder test box

OPTIONAL



Micro printer

OPTIONAL

Standard delivery

Instrument	SC800 portable spectrophotometer
Calibration	White and black calibration cavity
Power	Built-in Li-ion battery, power adapter
Software and cable	PC colour management software (download), USB cable
Care	Dust cover, wrist strap
Documents	User guide

Optional

Universal test component	Measuring station for liquids, pastes, powders and granules
Powder test box	Repeatable surface for powders and granules
Micro printer	Prints results at the instrument

SC800 or SC808 — which model?

Model	SC800	SC808
Purpose	**General colour measurement**	Traffic signs, safety colours, reflective sheeting
Traffic-sign evaluation	**—**	yes
Reflectance range	**—**	0–200 %
Illuminants	**13**	18
Colour simulation	**yes**	—
Standards / samples	**1 000 / 15 000**	1 000 / 10 000

Both models: 45/0 ring illumination, 400–700 nm, Ø8 mm, ΔE*ab 0.04 repeatability, 3.5" touch screen, USB, 90 × 77 × 230 mm, approx. 600 g.

SC800 · configuration and support

Ordering information, configuration checklist and contact

MEASUREMENT WORKFLOW, CONFIGURATION AND SUPPORT



SC800 · portable 45/0 measurement on panels, prints and plastics

Ordering information

Model	SC800 Portable Spectrophotometer
Geometry	45/0, Ø8 mm measuring aperture
Measurement	Reflectance spectrum 400–700 nm, colour values, ΔE, indices
Option for liquids and powders	Universal test component

Configuration checklist

Samples: size of the smallest area, surface (flat, textured, striped), powders or liquids.

Colour data: colour space, ΔE formula, illuminant and observer you report.

Use: laboratory, production line, goods receipt or field; stand-alone or with PC software.

SUPPLIER AND SUPPORT

COLO Lab Experts
Polje ob Sotli 4, SI-3255, Slovenia

Selection guidance: send your sample type and the colour values you report — we confirm the model, accessories and delivery time with the quotation.

QUICK CONTACT

colo.si

sales@colo.si

+386 70 713 437

COLO.SCIENCE · COLOUR MEASUREMENT SUPPORT

45/0 or d/8 — not sure which fits your samples?

Send your sample type, the smallest area to measure and the colour data you report — we propose the model and confirm it with the quotation.

Request quotation | sales@colo.si | +386 70 713 437

Specifications are subject to change without notice. Values refer to standard laboratory conditions.