

BENCHTOP GRATING SPECTROPHOTOMETER

CS6080

Benchtop Spectrophotometer · Reflectance d/8 · Transmittance d/0 · Pulsed xenon lamp · 360–780 nm

CS6080 Benchtop Spectrophotometer measures reflectance and transmittance colour of solids, plastics, films, liquids and powders in one instrument. A pulsed xenon lamp with 400/420/460 nm UV cut-off, a 154 mm integrating sphere and simultaneous SCI/SCE measurement give stable, repeatable CIE Lab and ΔE results for colour formulation and colour quality control in R&D and laboratory environments.

d/8 reflectance

d/0 transmittance

Pulsed xenon

360–780 nm

SCI + SCE

$\Delta E^*ab \leq 0.12$ inter-instrument

Haze ASTM D1003

7" touch screen

Document type: **Technical Specification Sheet**

Product: **CS6080 Benchtop Spectrophotometer**

Format: Print layout · A4 landscape

[CS6080 product page](#)

[Spectroscopy & Color — overview](#)

[Spectroscopy & Color catalogue](#)

[Request quote](#)

REFLECTANCE

d/8 · SCI + SCE · Ø30 to Ø4 mm

TRANSMITTANCE

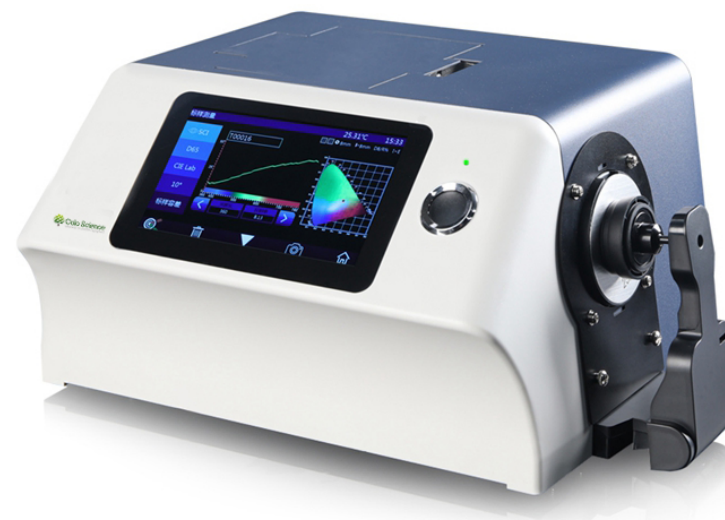
d/0 · SCI + SCE · haze ASTM D1003

REPEATABILITY

$\Delta E^*ab \leq 0.012$

INTER-INSTRUMENT

$\Delta E^*ab \leq 0.12$



CS6080 · benchtop spectrophotometer · reflectance and transmittance port

MODEL
CS6080

ADDRESS / HQ
**Polje ob Sotli 4
SI-3255, Slovenia**

CONTACT
**sales@colo.si
+386 70 713 437**

CS6080 • product overview

One benchtop instrument for reflectance colour, transmittance colour and haze

CORE TECHNOLOGY

Pulsed xenon lamp with 400/420/460 nm cut-off filters — UV included or excluded, for fluorescent and optically brightened samples.

Concave grating and 256-element double-array CMOS sensor — full spectrum 360–780 nm in 10 nm steps.

Built-in temperature sensor with compensation and an independent lamp monitor for stable long-term results.

Automatic aperture recognition — four switchable apertures; custom apertures on request.

Reflectance and transmittance spectra with accurate CIE Lab values for colour formulation and colour communication.

Quality-control and sample modes, standards and tolerances stored in the instrument (5 000 standards, 40 000 samples).

Built-in camera for precise positioning of small or patterned samples.

PC software for colour difference, indices, reports and data export.

PRODUCT HIGHLIGHTS



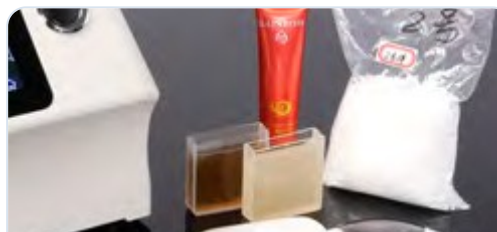
Reflectance

d/8 geometry for opaque plastics, coatings, textiles, paper and solids; SCI and SCE in one measurement.



Transmittance

d/0 geometry in the transmittance chamber for films, sheets, glass and liquids in cuvettes.



Liquids, powders, pastes

Cuvettes, powder cell and sample holders cover liquid, powder and solid samples.



Measuring apertures

Ø25.4, 15, 8 and 4 mm reflectance apertures, recognised automatically by the instrument.

APPLICATIONS



Automotive



Leather & textiles



Plastics & masterbatch



Paints, inks & pigments



Food



Laboratories & R&D

GEOMETRY

d/8 reflectance • d/0 transmittance

LIGHT SOURCE

Pulsed xenon • UV cut-off 400/420/460 nm

REPEATABILITY

$\Delta E^*_{ab} \leq 0.012$ (reflectance, Ø25.4 mm)

INTER-INSTRUMENT

$\Delta E^*_{ab} \leq 0.12$ (12 BCRA II tiles)

CS6080 • technical parameters

Pulsed xenon lamp • d/8 and d/0 • 360–780 nm • SCI/SCE

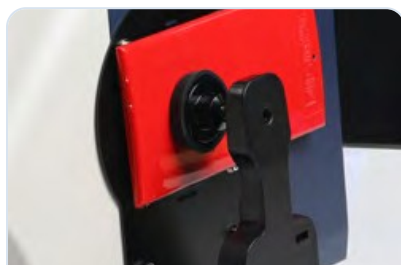
TECHNICAL PARAMETERS

Optical geometry	Reflectance: d/8 (diffuse illumination, 8° viewing), SCI and SCE simultaneously Transmittance: d/0 (diffuse illumination, 0° viewing), SCI and SCE UV included / UV excluded	Colorimetric indices	WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM E313), metamerism index MI, APHA/Hazen/Pt-Co, Gardner, Saybolt, 555 index, staining and colour fastness, colour strength, opacity, haze (ASTM D1003)
Standards	CIE No.15, ISO 7724/1, ASTM E1164, DIN 5033 Teil 7; haze per ASTM D1003	Observer	2° and 10°
Integrating sphere	Ø 154 mm	Illuminants	D65, A, C, D50, D55, D75, F1–F12, CWF, DLF, TL83, TL84, TPL5, U30
Light source	Pulsed xenon lamp 360–780 nm; 400 nm, 420 nm and 460 nm cut-off	Displayed data	Spectrum and values, chromaticity values, colour difference values and graph, pass/fail, colour offset
Spectral separation	Concave grating	Measuring time	approx. 2.4 s (SCI + SCE approx. 5 s)
Sensor	Double-array CMOS image sensor, 256 elements	Repeatability	Reflectance Ø25.4 mm/SCI: spectral SD ≤ 0.06 %, ΔE*ab ≤ 0.012 Transmittance Ø25.4 mm/SCI: spectral SD ≤ 0.06 %, ΔE*ab ≤ 0.015 (white tile, 30 measurements at 5 s intervals)
Wavelength range	360–780 nm	Inter-instrument agreement	Ø25.4 mm/SCI: ΔE*ab ≤ 0.12 (average of 12 BCRA Series II tiles)
Wavelength pitch	10 nm	Display	7" TFT capacitive touch screen
Half bandwidth	5 nm	Interfaces	USB, Bluetooth, serial port for printer
Reflectance range	0–200 %	Data storage	5 000 standards, 40 000 samples
Measuring apertures	Reflectance: Ø30/25.4 mm, Ø18/15 mm, Ø10/8 mm, Ø6/4 mm Transmittance: Ø30/25 mm Automatic aperture recognition; custom apertures on request	Lamp life	5 years, > 3 million measurements
Specular component	Reflectance: SCI & SCE • Transmittance: SCI & SCE	Power supply	DC 24 V, 3 A adapter
Colour spaces	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter Lab, Munsell, s-RGB, DIN, βxy	Dimensions (W × D × H)	370 × 300 × 200 mm
Colour difference	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc (2:1), ΔE*cmc (1:1), ΔE*00, ΔE (Hunter), DIN ΔE99	Net weight	approx. 9.6 kg
		Operating environment	0–40 °C, 0–85 % RH, non-condensing
		Storage environment	-20–50 °C, 0–85 % RH, non-condensing

CS6080 • accessories and sample handling

Standard delivery and optional components

ACCESSORIES



Reflectance sample holder

STANDARD



Apertures Ø25.4 / 15 / 8 / 4 mm

STANDARD



Transmittance chamber with test component and black baffle

STANDARD



Cuvette holder for liquids

STANDARD



Cells for liquids, powders and pastes

ON REQUEST

Standard delivery

Instrument	CS6080 benchtop spectrophotometer
Calibration	White calibration tile, black calibration cavity
Apertures	Ø25.4 mm, Ø15 mm, Ø8 mm, Ø4 mm
Transmittance	Transmittance test component, black baffle
Sample handling	Sample holder
Software and cables	PC software, USB cable, DC 24 V power adapter
Documents	User guide

Optional

Micro-printer	Printing of results at the instrument
Micro transmittance clamp	Ø4 mm aperture for small transmittance samples
Inversion component	Instrument inversion component for sample positioning
Culture dish	Sample dish for powders and granules
Custom apertures	On request

Cuvette size and powder cell are selected according to the sample; COLO confirms the set with the quotation.

REFLECTANCE APERTURES

Ø30/25.4 • Ø18/15 • Ø10/8 • Ø6/4 mm

TRANSMITTANCE APERTURES

Ø30/25 mm • Ø4 mm optional

SAMPLE TYPES

Solids • films • liquids • powders

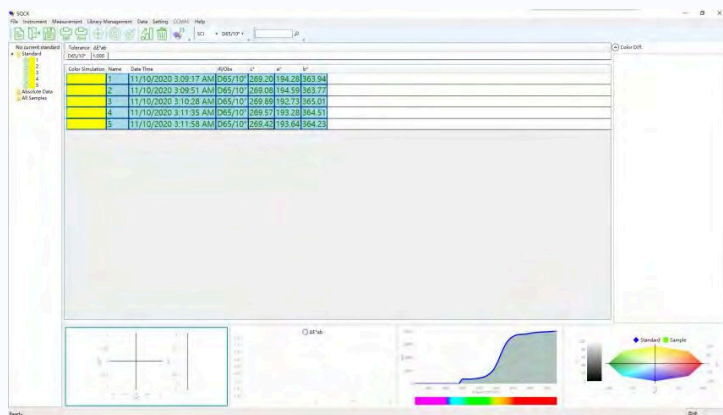
MEASURING TIME

≈ 2.4 s • SCI + SCE ≈ 5 s

CS6080 • configuration and support

Ordering information, configuration checklist and contact

SOFTWARE, CONFIGURATION AND SUPPORT



PC software • colour difference, spectrum and colour plot

Ordering information

Model	CS6080 Benchtop Spectrophotometer
Light source	Pulsed xenon lamp, UV cut-off 400/420/460 nm
Measurement	Reflectance d/8 and transmittance d/0, SCI/SCE, haze
Power	DC 24 V, 3 A power adapter

Configuration checklist

Samples: opaque solids, films, liquids or powders — defines apertures and holders.

Measurement: reflectance, transmittance, haze or all three.

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

Existing data: reference standards or values to be transferred.

MANUFACTURER 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 configuration, accessories and delivery time with the quotation.

QUICK CONTACT

 colo.si

 sales@colo.si

 +386 70 713 437

COLO.SCIENCE • COLOUR MEASUREMENT SUPPORT

Need help choosing apertures, sample cells or the right colour data?

Send your sample type (solid, film, liquid or powder), the colour space and ΔE formula you report and any reference values — we propose the configuration 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.