Colo Science
Laboratory & Scientific Equipment

COLO.SCIENCE · TECHNICAL SPECIFICATION

PORTABLE D/8 SPECTROCOLORIMETER

CS7020

Portable Spectrocolorimeter · d/8 · SCI · LED · 400–700 nm · Ø8 mm · 3.5" touch screen

CS7020 Portable Spectrocolorimeter measures colour values and colour difference of plastics, paints, inks, textiles, paper and powders — in the laboratory, at the production line or at goods receipt. A 40 mm integrating sphere, flat grating and a dual-row silicon photodiode array give stable readings in a 460 g handheld instrument with a 3.5" touch screen. Spectral sensor at colorimeter price: Lab and ΔE values for routine colour difference control, with USB connection to the PC software.

d/8 · SCI · LED · 400–700 nm · Ø8 mm · ΔE*ab ≤ 0.08 repeatability · 3.5" touch screen · USB

Document type: **Technical Specification Sheet**
Product: **CS7020 Portable Spectrocolorimeter**
Format: Print layout · A4 landscape

CS7020 product page | Spectroscopy & Color — overview | Spectroscopy & Color catalogue

Request quote

GEOMETRY	APERTURE
d/8 · SCI	Ø8 mm
REPEATABILITY	**INTER-INSTRUMENT**
ΔE*ab ≤ 0.08	ΔE*ab ≤ 0.4



CS7020 · portable spectrocolorimeter with white calibration tile

MODEL
CS7020

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

CONTACT
sales@colo.si
+386 70 713 437

CS7020 · product overview

Portable d/8 colour measurement for laboratory and production

CORE TECHNOLOGY

d/8 geometry with SCI — the geometry used in colour standards worldwide, for routine samples.

Combined LED light source — full-band balanced LED, light source life 5 years.

Flat grating and dual-row silicon photodiode array (24 groups), 400–700 nm in 10 nm steps.

Aperture Ø8 mm.

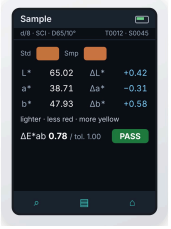
Cross-hair positioning on the measuring port for repeatable placing on the sample.

3.5" capacitive touch screen with colour values, ΔE, pass/fail and colour simulation.

500 standards, 10 000 samples stored in the instrument; single or averaged measurement (2–99).

USB to the PC software for standards, tolerances, trends and reports.

PRODUCT HIGHLIGHTS



Results on the touch screen
Lab values, ΔL*, Δa*, Δb*, ΔE* against the tolerance, pass/fail and a short colour description.



Illuminant and observer
3 illuminants, observer 10°; selected on the screen.



White calibration tile
White and black calibration in seconds before each measuring session.



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

APPLICATIONS


Plastics


Paints & inks


Leather & textiles


Automotive parts


Food


Laboratories & QC

LIGHT SOURCE	COLOUR SPACES	MEASURING TIME	WEIGHT
LED	CIE Lab, XYZ, LCh ...	≈ 1.5 s	≈ 460 g · Li-ion battery

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CS7020 · technical parameters

d/8 · SCI · LED · 400–700 nm · Ø8 mm

TECHNICAL PARAMETERS

Optical geometry	d/8 (diffuse illumination, 8° viewing), SCI
Standards	CIE No.15, ISO 7724-1, ASTM E1164, DIN 5033 Teil 7
Integrating sphere	Ø 40 mm
Light source	Combined LED light source
Spectral separation	Flat grating
Sensor	Silicon photodiode array, dual row, 24 groups
Wavelength range	400–700 nm
Wavelength pitch	10 nm
Half bandwidth	10 nm
Measuring range	L*: 0–100; reflectance at 3 user-selected wavelengths (default 440, 550, 600 nm)
Measuring aperture	Ø8 mm
Specular component	SCI
Colour spaces	CIE Lab, XYZ, Yxy, LCh
Colour difference	ΔE*ab, ΔE*00

Observer	10°
Illuminants	D65, A, F2 (CWF)
Displayed data	Reflectance at 3 selected wavelengths, chromaticity values, colour difference values and graph, pass/fail, colour simulation, colour offset
Display resolution	display 0.1, stored 0.01
Measuring time	approx. 1.5 s
Repeatability	ΔE*ab ≤ 0.08 (white tile, 30 measurements at 5 s intervals after white calibration)
Inter-instrument agreement	ΔE*ab ≤ 0.4 (average of 12 BCRA Series II tiles)
Measurement mode	Single measurement, average of 2–99 measurements
Positioning	Cross-hair positioning on the measuring port
Display	3.5" TFT colour LCD, capacitive touch screen
Interfaces	USB
Data storage	500 standards, 10 000 samples
Power supply	Li-ion battery, 6 000 measurements within 8 hours
Light source life	5 years, > 3 million measurements
Dimensions (L × W × H)	81 × 71 × 214 mm
Weight	approx. 460 g
Environment	Operation 0–40 °C, 0–85 % RH (non-condensing), altitude < 2000 m; storage −20–50 °C

CS7020 · accessories and series

Standard delivery, optional components and the CS70 series at a glance

ACCESSORIES



White and black calibration

STANDARD



PC software

STANDARD



Powder test box

OPTIONAL



Micro printer

OPTIONAL

Standard delivery

Instrument	CS7020 portable spectrocolorimeter
Aperture	Ø8 mm platform
Software	PC software (download)
Calibration	White and black calibration cavity
Care	Protective cover, wrist strap
Operation	Power adapter, USB cable, user guide

Optional

USB micro printer	Prints results directly from the instrument
Powder test box	For powders, granules and pastes

CS70 series — which model?

Model	CS7036	CS7030	CS7020	CS7010
Light source	LED + UV	LED	LED	LED
Specular component	SCI + SCE	SCI + SCE	SCI	SCI
Aperture	Ø8 + Ø4 mm	Ø8 mm	Ø8 mm	Ø8 mm
Spectral data shown	400–700 nm, 10 nm	400–700 nm, 10 nm	3 wavelengths	1 wavelength
Repeatability ΔE*ab	0.05	0.06	0.08	0.1
Positioning	Camera	Camera	Cross-hair	Cross-hair
Connection	USB + Bluetooth	USB	USB	Stand-alone

All models: d/8, Ø40 mm sphere, 400–700 nm, 3.5" touch screen, 81 × 71 × 214 mm, approx. 460 g.

CS7020 · configuration and support

Ordering information, configuration checklist and contact

SOFTWARE, CONFIGURATION AND SUPPORT



CS7020 · handheld measurement on plaques, films and granules

Ordering information

Model	CS7020 Portable Spectrocolorimeter
Measurement	d/8, SCI, combined LED light source
Aperture	Ø8 mm
Connection	USB

Configuration checklist

Samples: size of the smallest area to measure, surface (glossy, matt, textured), powders or granules.

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

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

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 model, accessories and delivery time with the quotation.

QUICK CONTACT

colo.si

sales@colo.si

+386 70 713 437

COLO.SCIENCE · COLOUR MEASUREMENT SUPPORT

Not sure which portable model 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.