Colo Science
Laboratory & Scientific Equipment

COLO.SCIENCE · TECHNICAL SPECIFICATION

LARGE-APERTURE 45/0 COLORIMETER · Ø20 MM · TEXTURED AND WET SAMPLES

CC20XE

Portable Colorimeter · 45/0 · Ø20 mm · CIE Lab, LCh, XYZ · D65 · 2.8" display

CC20XE Portable Colorimeter is a hand-held tristimulus colorimeter with 45/0 geometry and a silicon photodiode detector. It measures the colour of a sample and its difference from a stored standard — CIE Lab, LCh, XYZ under illuminant D65 and ΔE*ab, ΔL*a*b*, ΔE*C*h* — and shows pass/fail against the set tolerance. The large-aperture model: 45/0 geometry sees colour as the eye does, including the effect of surface texture, and the Ø20 mm aperture averages uneven samples. The upright body lets only the aperture touch wet products.

45/0 · Ø20 mm aperture · CIE Lab, LCh, XYZ · D65 · ΔE*ab 0.08 repeatability · 100 / 20 000 records · Li-ion battery · PC software · Ø20 mm · wet samples

Document type: **Technical Specification Sheet**
Product: **CC20XE Portable Colorimeter**
Format: Print layout · A4 landscape

CC20XE product page · Spectroscopy & Color — overview · Spectroscopy & Color catalogue · Request quote

GEOMETRY	APERTURE
45/0	Ø20 mm
REPEATABILITY	**MEMORY**
ΔE*ab 0.08	100 / 20 000



CC20XE · upright 45/0 colorimeter with Ø20 mm aperture

MODEL
CC20XE

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

CONTACT
sales@colo.si
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CC20XE · product overview

Food (meat, fruit), textiles and denim, plastic granules and powders, coil coating, paper

CORE TECHNOLOGY

45/0 geometry with annular illumination — colour as the eye sees it, including the effect of surface texture; suited also to polarising materials.

Ø20 mm measuring aperture averages the colour of striped, fibrous and uneven surfaces in one reading.

Upright body with a large flat end face — only the aperture touches the sample, so wet and moist products do not soil the instrument.

CIE Lab, LCh and XYZ under illuminant D65 and the CIE 10° observer.

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

100 standards, 20 000 samples stored in the instrument; larger databases in the PC software.

Rechargeable Li-ion battery 3 200 mAh — no disposable batteries.

USB and PC software — colour difference analysis, indices, sample database and reports.

PRODUCT HIGHLIGHTS



Ø20 mm aperture
Averages the colour of textured, striped and uneven surfaces — meat, fabrics, granules.



Upright body
Only the aperture touches the sample — suited to wet and moist products without soiling the instrument.



PC software
Colour difference analysis, sample database and reports on the PC; data by USB.

APPLICATIONS



Food & agriculture



Leather & textiles



Plastics & granules



Paints & coatings



Laboratory & QC



Automotive parts

GEOMETRY	COLOUR SPACES	ILLUMINANT	BATTERY
45/0	CIE Lab, LCh, XYZ	D65	Li-ion 3 200 mAh

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CC20XE · technical parameters

45/0 · Ø20 mm · CIE Lab, LCh, XYZ · D65

TECHNICAL PARAMETERS

Optical geometry	45/0 (annular 45° illumination, 0° viewing)
Standards	CIE No.15
Light source	LED (blue-light excitation)
Sensor	Silicon photodiode
Measuring aperture	Ø20 mm
Colour spaces	CIE Lab, LCh, XYZ
Colour difference	ΔE*ab, ΔL*a*b*, ΔE*C*h*
Illuminant	D65
Observer	CIE 10°
Displayed data	Colorimetric values, colour difference values, pass/fail, direction of the colour offset
Positioning	Illumination positioning and cross positioning; large flat end face
Calibration	Manual white calibration

Repeatability	Within ΔE*ab 0.08 (white plate, average of 30 measurements)
Inter-instrument agreement	Within ΔE*ab 0.5
Measuring time	1.5 s
Display	2.8" TFT colour display
Data storage	100 standards, 20 000 samples
Interface	USB
Software	PC colour quality software (Windows)
Printer	Micro thermal printer (optional)
Power supply	Li-ion battery 3.7 V, 3 200 mAh
Charging	First full charge approx. 8 h
Light source life	5 years, more than 1.6 million measurements
Dimensions (L × W × H)	205 × 67 × 80 mm
Weight	approx. 500 g (with battery)
Environment	Operation 0–40 °C; storage −20–50 °C

CC20XE · accessories and series

Standard delivery, optional components and the CC10 / CC200 / CC20XE models at a glance

ACCESSORIES



Powder test box

OPTIONAL



Micro printer

OPTIONAL

Standard delivery

Instrument	CC20XE portable colorimeter
Power	Built-in Li-ion battery, power adapter
Software and cable	PC colour quality software (download), USB cable
Care	Wrist strap
Documents	User guide

Optional

Powder test box	Repeatable surface for powders and granules
Micro printer	Prints results at the instrument

CC10, CC200 or CC20XE — which model?

Model	CC10	CC200	CC20XE
Geometry	8/d	8/d	**45/0**
Aperture	Ø4 mm	Ø8 mm	**Ø20 mm**
Colour spaces	CIE Lab	Lab, LCh, XYZ	**Lab, LCh, XYZ**
White calibration	—	yes	**yes**
Standards / samples	100 / 10 000	100 / 20 000	**100 / 20 000**
PC software	—	yes	**yes**
Best for	Teaching, orientation	Routine QC	**Textured and wet samples**

All models: illuminant D65, LED source, silicon photodiode, built-in Li-ion battery 3 200 mAh. For spectral data, SCI/SCE and more illuminants see the CP20 spectrocolorimeters.

CC20XE · configuration and support

Ordering information, configuration checklist and contact

MEASUREMENT WORKFLOW, CONFIGURATION AND SUPPORT



CC20XE · food (meat, fruit), textiles and denim, plastic granules and powders, coil coating, paper

Ordering information

Model	CC20XE Portable Colorimeter
Geometry	45/0
Aperture	Ø20 mm
Options	Powder test box, Micro printer

Configuration checklist

Samples: size of the smallest area, surface (smooth, textured, wet), powders or granules.

Colour data: colour space and ΔE formula you report; whether spectral data or other illuminants are needed (then a spectrocolorimeter).

Use: teaching, laboratory, production line or goods receipt; 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

Colorimeter or spectrocolorimeter?

Send your sample type and the colour data you report — we propose the instrument 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.