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Technical Spectrophotometer PCE-CSM 10

Color meter PCE-CSM 10 for quality control

**PC software included / Li-ion battery / different color spaces / black and white calibration
determination of reference values and samples / white calibration / 3.5" touch screen**

The color meter PCE-CSM 10 was developed for quality control, offers a high accuracy and comes with a 3.5" touch screen display. When using the color meter, you can choose between different color spaces (CIE LAB, XYZ, Yxy, LCh, LUV, LAB&WI&YI). After a measurement with the color meter, the reading can be used as a reference value while other readings can be recorded as a sample and later be compared to the reference value easily.

In addition to the individual color space coordinates, the deviation between the reading is also displayed. When using the color meter, it is possible to store up to 1000 reference values and up to 25000 samples on the device. The measured data can also be transferred to a PC via the USB interface. A special PC software is included in the package.

- CIE LAB, XYZ, Yxy, LCh, LUV, LAB&WI&YI
- black and white calibration
- determination of reference values and samples
- 3.5" touch screen display
- rechargeable lithium-ion battery
- high accuracy
- easy to use
- incl. PC software
- 8 mm aperture

Technical specifications

Measuring geometry	8°/d
Measuring aperture	Diameter 8 mm
Integrating sphere	Diameter 58 mm

Sensor	Silicon photoelectric diode
Wavelength range	400 ... 700 nm
Reflection factor range	0 ... 200 %
Color spaces	CIE LAB, XYZ, Yxy, LCh, LUV, LAB&WI&YI
Color index	ΔE^*ab , ΔE^*uv , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$, $\Delta E^*cmc(l:c)$, CIE2000, ΔE^*00 , $\Delta E(h)$
Chromaticity data	WI (ASTM E313, CIE/ISO, AATCC, Hunter)
	YI (ASTM D1925, ASTM E313)
Chromaticity data	TI (ASTM E313, CIE/ISO)
	Metamerism Index Mt color stain, color fastness
Observation angle	2° / 10°
Measuring time	1.2 seconds
Light source	D65, A, C, D50, D55, D75, F1, F2(CWF), F3, F4, F5, F6, F7 (DLF), F8, F9, F10 (TPL5), F11 (TL84), F12(TL83/U30)
Light source device	combined LED
Repeatability	Spectral reflection: standard deviation ~ 0.1 % (400...700 nm: within ~0.2 %) colorimetric value: standard deviation: within ΔE^*ab 0.04
Error between each equipment	within ΔE^*ab 0.02
Display functions	Spectral value/graph, colorimetric value, color difference (value/graph), PASS/FAIL result, color offset, color simulation, color index settings (ΔE^*94 , ΔE^*cmc , ΔE^*2000), error limit settings, time settings, language settings, restore factory settings
Display	3.5" TFT touch screen
Interface	USB / RS-232
Storage	1,000 reference values, 25,000 samples
Power supply	Rechargeable lithium-ion battery 3.7 V at 3,200 mAh
Life of light source	5 years > 1.6 million measurements
Operating conditions	0 ... +40 °C
Storage conditions	-20 ... +50 °C
Dimensions	90 x 77 x 230 mm
Weight	600 g

Delivery contents

- 1 x Colorimeter PCE-CSM 10,
- 1 x Aluminium carrying case
- 1 x Mains adapter
- 1 x Lithium-ion battery
- 1 x Calibration plate (white)
- 1 x Calibration plate (black)
- 1 x Protective cover
- 1 x USB cable
- 1 x Wrist band
- 1 x PC software
- 1 x Instruction manual