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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 , $\Delta E(h)$ |
| Chromacity data | WI (ASTM E313, CIE/ISO, AATCC, Hunter) |
| | YI (ASTM D1925, ASTM E313) |
| Chromacity 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