

Colorimeter PCE-CRM 40



PCE-CRM 40 Colorimeter

Measurement range up to 150,000 lx / Measures correlated color temperature (CCT) / Standard chromaticity diagrams according to CIE 1931 and CIE 1976 / Indicates wavelength / Presents tristimulus and RGB values / Includes USB interface, cable and PC software

With the colorimeter or spectrophotometer PCE-CRM 40, important photometric factors in the field of light measurement can be determined. These include the tristimulus values of XYZ, the u' and v' color location coordinates according to CIE 1976, and the xy color location coordinates according to CIE 1931. Moreover, further color statistics are measured as absolute values and differences. The user can determine the dominant wavelength within the sensitivity range of the spectrophotometer, which is 360 ... 780 nm, as well as the color density (Pe) and the correlated color temperature (CCT) in Kelvin.

Also, the spectrophotometer can measure the illuminance in lux (lx) or foot-candle (fcd) as well as the light flux in lumens (lm) and show the color location in the RGB color space. Due to the ergonomic single-handed operation, the large display, memory, data interface and software, measurements with the spectrophotometer can be carried out quickly and the results are reproducible. The test results can be recorded by means of the software. Its specifications make the spectrophotometer perfectly suitable to classify and optimize lighting installations and conditions in various fields of application.

- ▶ Measurement of colour temperature
- ▶ Lux measurement up to 150 kLux
- ▶ Representation of Tristimulus and RGB
- ▶ Ideal for LEDs
- ▶ SD memory
- ▶ Colour LCD

Specifications

Measurement functions	Tristimulus values: XYZ Chromaticity: $E_v xy$, $E_v u'v'$ Correlated colour temperature: T_c Colour difference: $\Delta(XYZ)$, $\Delta(E_v xy)$, $\Delta(E_v uv)$, ΔE_v ΔT_c Δuv Chromaticity coordinates: ICE1931 (x, y), ICE1976 (u, v) Dominant wavelength: λ_d Colour fastness: P_e Luminous flux: Φ , RGB parameter, colour chart, maximum recording and indicator
Measuring range	0.1 ... 150,000 lx 0.01 ... 15000 fcd Ev: 5 lx / 0.5 fcd or above in four automatically selected ranges (lx or fcd is switchable)
Spectral range	360 ... 780 nm
Relative spectral sensitivity	Based on CIE standard X (λ), y (λ), and Z (λ), deviation within 6% (f1 ') of CIE spectral luminous efficiency V (λ)
Cosine correction	Ev: < 3% (f2)
Accuracy	Ev : $\pm 5\% \pm 1$ digit of displayed value Xy: ± 0.003 lx (at 500 lx, standard A)
Repeatability	Ev : $\pm 0.5\% + 1$ digit (2σ) xy: ± 0.0005 (measured at 500 lx, standard A)
Temperature drift	Ev : $\pm 3\% \pm 1$ digit of the indicated value xy: + -0.003
Response time	0.5 second (for continuous measurement)
Sensor type	Silicon photocell
Interface	USB Slot for SD card
Display	3.2" color LCD
Operating conditions	-10 ... 40°C / 14 ... 104°F <85% RH
Storage conditions	-20 ... 40°C / -4 ... 104°F <85% RH
Power supply	2200-mAh rechargeable lithium-ion battery
Battery life	Min. 12 hours
Dimensions	210 x 80 x 35 mm / 8.2 x 3.1 x 1.37 in
Weight	300 g / < 1 lb including battery

More information

Manual



Video



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