

COLOR METER

PCE-CRM 40



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

With the color meter 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.

Specification

Light	
Measuring range	0,1 ... 150000 lx
Resolution	5 lx
Accuracy	±(5% of reading ±1 digit)
Light	
Measuring range	0,01 ... 15000 fc
Resolution	0,5 fc
Accuracy	±(5% of reading ±1 digit)

General technical data	
Accuracy	xy: ±0.003 (measured at 500 lx, Standard-A)
Measuring functions (additional information)	Tristimulus values: XYZ Chromaticity: Ev xy, Ev u'v' Correlated colour temperature: Tc Colour difference: Δ (XYZ), Δ (Evxy), Δ (Evuv), ΔEv ΔTc Δuv Chromaticity coordinates: ICE1931 (x, y), ICE1976 (u, v) Dominant wavelength: λd Colour fastness: Pe Luminous flux: Φ RGB parameters, colour table, maximum recording and display
Units	lx, FC
Display type	LC colour display
Display size	3,2 Inch
Storage medium	Micro SD card, Internal memory
Storage capacity	8 GB
Memory capacity (additional information)	The device can save up to nine data records internally.
Interface	USB-C
Sensor	Silicon photocell
Response time	0,5 s
Response time Additional information	during continuous measurement
Operating time	12 h
Repeatability	Ev: ±0.5% + 1 digit (200) xy: ±0.0005 (measured at 500 lx, Standard-A)
Colour difference	Δ (XYZ), Δ (Evxy), Δ (Evuv), ΔEv ΔTc Δuv
Wavelength range	360 ... 780 Nm
Sensitivity	Relative spectral sensitivity: Based on CIE standard X(λ), Y(λ) and Z(λ), deviation below 6% (f1') of the CIE spectral luminous efficiency V(λ)
Drift	Temperature drift: Ev: ±3% ±1 digit of the displayed value xy: ±0.003
Cosine adjustment (f2)	Ev: <3%
Menu language	English, Chinese, English (GB)
Protection class (device)	IP20
Power supply	5 V DC
Connector type	Device-europlug
(Rechargeable) battery	1 x 3,7 V internal , Lithium-ion battery
Capacity	2200 mAh
Operating conditions	-10 ... 40 °C , 0 ... 85 % RH
Storage conditions	-20 ... 40 °C , 0 ... 85 % RH
Dimensions (L x W x H)	210 x 80 x 35 mm
Weight	300 g