

SPECTROPHOTOMETER

PCE-CSM 100



- » **D/8° measuring geometry with SCI**
- » **Measuring aperture Ø 50 mm**
- » **7 inch IPS touchscreen**
- » **12 colour spaces - CIE Lab, Luv, LCh, Yxy and more**
- » **8 ΔE color difference formulas**
- » **Memory for 1000 color values & 1000 standards**
- » **App and PC software**

The spectrophotometer is a precise desktop measuring device for objective color testing in numerous industrial and commercial applications. It has a D/8° measuring geometry including a mirror component (SCI) and a powerful full-spectrum LED light source and records color data in the wavelength range from 400 to 700 nm with a spectral interval of 10 nm. The measuring time of around 1.5 seconds enables efficient color checks on a wide variety of surfaces, even with gloss or structure.

Common color spaces such as CIE Lab, Luv, LCh, Yxy, CMYK and RGB as well as various white and yellow indices are supported. The spectrophotometer can also display spectral reflectance curves. This enables a detailed analysis of the color behavior across the entire visible spectrum. Numerous formulas are available for colour difference evaluation, including ΔEab, ΔEuv, ΔE94, ΔE00 and CMC variants. The repeatability is $\Delta E_{ab} \leq 0.03$, the cross-device consistency is $\Delta E_{ab} \leq 0.4$. This was tested using standardized color tiles.

The spectrophotometer has several integrated, universal electronic color tables. These can quickly determine the nearest color table number during color measurement with an accuracy of over 90 %. This function supports standardized color communication and facilitates color comparison in production, quality control or incoming goods. An individual threshold value for color differences can be defined using the integrated QC function.

Specification

General technical data	
Display type	LC touch display
Display size	7 Inch
Display resolution	1024 x 600
Storage medium	Internal memory
Storage capacity	2000 Data records
Memory information	1000 colours 1000 colour comparisons
Interface	USB-C, Wireless
Standard(s)	JJG 595-2002, GB/T 3978-2008, GB/T 7921-2008, GB/T 11186.1-1989, GB/T 11186.2-1989, GB/T 11186.3-1989
Repeatability	0,03 ΔE*ab
Light source	Full spectrum LED (simulates CIE D65)
Measurement time	1,5 s
Colour spaces	CIEL a* b*, LCh, Yxy, CMYK, RGB, WI-98, WI-Gauz, WI-Hunter, YI-98, WI-R457, CIEL u* v*, Spectra
Measuring aperature	50 mm
Measuring geometry	D/8
Gloss component	SCI (Specular Component Included)
Wavelength range	400 ... 700 Nm
Observer	10°
Calibration	White standard in the cover cap
Colour difference	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00, ΔE*cmc(1:1), ΔE*cmc(1,4:1)
Menu language	English, English (GB), Chinese
Protection class (device)	IP20
Power supply	110 ... 277V AC 50/60 Hz
Connector type	Schuko plug
(Rechargeable) battery	1 x 3 V Button cell , lithium
Capacity	220 mAh
Operating conditions	0 ... 45 °C , 0 ... 85 % RH
Storage conditions	-25 ... 55 °C , 0 ... 85 % RH
Dimensions (L x W x H)	253 x 210 x 160 mm
Weight	3081 g