

SPECTROMETER

PCE-PSR 100



- » **spectral resolution: ± 0.2 nm**
- » **reproducibility: ± 0.5 nm**
- » **accuracy of the chromaticity coordinate (Δx , Δy): ± 0.005**
- » **correlated colour temperature CCT: 1500 ... 100000 K**
- » **illuminance range: 0.1 ... 500,000 lx**
- » **capacitive 5-inch IPS touch screen**
- » **rechargeable 4000 mAh lithium-ion battery**
- » **8 GB internal memory**
- » **PC software**

The high-precision spectrometer was developed to perform even the most demanding light measurements with the highest accuracy and reliability. Thanks to a spectral resolution of ± 0.2 nm and a reproducibility of ± 0.5 nm, it provides precise and consistent measurement results. The remarkable accuracy of the chromaticity coordinate (Δx , Δy) of ± 0.005 enables exact colour representation and is therefore ideal for applications in light and colour analysis.

With a wide illuminance range of 0.1 to 500000 lux and an accuracy of ± 0.1 lux, the spectrometer is suitable for both weak light sources and extremely bright environments. The measurement of the correlated colour temperature (CCT) from 1500 K to 100000 K with a deviation of ± 0.6 % enables a detailed assessment of the light quality and colour temperature.

The spectrometer is not only technically powerful but also designed to be user-friendly. The capacitive 5-inch IPS touch screen offers intuitive operation and ensures that all measurement data is clearly displayed, even in difficult lighting conditions. With the integrated rechargeable 4000 mAh lithium-ion battery, the device guarantees long operating times so that even extensive measurements can be carried out without any problems. The internal memory of 8 GB offers sufficient space for a large amount of measurement data which can be saved directly to the device.

PC software is available for seamless data processing and advanced analysis functions.

Specification

Light	
Measuring range	5 ... 500000 lx
Resolution	0,1 lx

Accuracy	±0.1 lx
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General technical data	
Display type	LCD touchscreen
Display size	5 in
Display resolution	480 x 854
Storage medium	Internal memory
Storage capacity	8 GB
Memory capacity (additional information)	approx. 5000 data records
Classification	Class A
Interface	USB, BLE switch
Operating time	20 h
Automatic power-off from...to	2 ... 60 min.
Reproducibility	±0.5 nm
Colour spaces	CIE1931, CIE1960, CIE1976, SDCM, CRI1, CRI2, TM30 (Distribution of Fidelity), TM30 (Change Distribution), TM30 (Rg/Rf)
Wavelength range	380 ... 780 Nm
Light parameters	CCT (K), Illuminance (lx), Coordinate-x, y, Coordinate-u, v, Coordinate-u', v', PeakWave (nm), CentralWave (nm), DominantWave (nm), CentroidWave (nm), HalfWidth (nm), Darksignal, Peak signal, Purity (%), IntegTime (ms), SDCM, Ra, Ravg, R1-R5, R6-R10, R11-R15, duv, R-ratio (%), G-ratio (%), B-ratio (%), Irradiance (W/m²), Foot candle (fc), S/P, CIE1931-X, CIE1931-Y, CIE1931-Z, CQS, Rg, Rf, Transmittance (%)
Menu language	English, Chinese, English (GB)
Protection class (device)	IP56
Power supply	100 ... 240V AC 50/60 Hz
Connector type	Euro plug
(Rechargeable) battery	1 x 3,7 V internal , Lithium-ion battery
Capacity	4000 mAh
Operating conditions	-10 ... 40 °C , 70 % RH
Storage conditions	-20 ... 45 °C , 70 % RH
Dimensions (L x W x H)	160 x 82 x 22 mm
Weight	390 g