



Spectrophotometer PCE-CSM 30

High quality processing table spectrometer / Touchscreen /

Simple user interface / Memory for up to 2000 measurements /

Evaluation via the PC with USB connection / Location function

The table spectrophotometer, like any other spectrophotometer, is responsible for color measurement. This very accurate table spectrophotometer is intended for laboratory use to perform measurements on paper, textiles or, for example, reference samples. Measurements can be performed quickly and easily with this table spectrometer thanks to the easy-to-use touch screen interface. Due to the built-in clamping device in the table spectrometer, the test specimens are optimally attached to the measuring device.

Slipping is also prevented by the clamping device. In the table spectrometer a camera is installed, which helps the operator to optimally position the test object. Due to the long life of the bulb and a stable construction, it offers the highest degree of user-friendliness. The built-in memory allows up to 2000 measurements to be stored. The illuminant used on the table spectrometer is even designed to carry out three million measurements.

In particular the high-quality and robust processing of the table spectrometer is evident at first glance. While working with the table spectrometer the high measuring accuracy of the device is important. A table spectrometer is often used in production and quality assurance or in laboratory analysis. Here it is important that a constant quality is always produced and that individual parts not only look similar but look the same. For this, a high measurement quality is of enormous importance. The simple design makes cleaning fast and easy. Thanks to the USB connection with the PC, you can use the table spectrometer to analyse measurements directly on the PC using the supplied software.

- Touchscreen
- USB cable for data transfer
- Temperature display
- Device software included
- High quality
- High measuring accuracy and stability
- Single and average measurements
- Non-slip

Specifications:

Recording geometry:

Reflection: $8^\circ / d$, (SCI and SCE, including UV / exclusive UV)

Permeability: $0^\circ / d$, (SCI and SCE, including UV / exclusive UV)

Size of integration sphere: 154 mm / 6"

Spectrophotometric operation: Concave grid

Sensor: 256 Pixel CMOS image sensor

Wavelength interval: 10 nm

Wavelength spacing 10 nm

Measured reflection range 0 ... 200%

Colorimetric index

WI (ASTM E313, CIE/ISO, AATCC, Hunter)

YI (ASTM D1925, ASTM 313)

TI (ASTM E313, CIE/ISO)

MI (Metamerism Index)

Stain fastness, colour fastness, colour intensity, opacity

Gardner Index, Pt-Co Index, 555 Index

Specular component: SCI, SCE

Colour ranges:

CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB

Munsell, s-RGB, HunterLab, DIN, β_{xy}

Formulas for colour inequality:

ΔE^*ab , ΔE^*uv , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$

ΔE^*00v , $\Delta E(\text{Hunter})$, DIN $\Delta E99$

Light source:

D65, A, C, UV, D50, D55, D75, F1, F2, F3

F4, F5, F6, F7, F8, F9, F10, F11, F12

Viewing angle: $2^\circ / 10^\circ$

Data display:

Spectrogram values, Samples of colour values

Values / graph of colour differences

Pass / Fail result, Colour balance

Device error: Φ 25.4 mm / SCI, ΔE^*ab 0.15

Measurement mode: Single measurement, average value measurement

Location method: Finding the measuring points by camera

Power supply:

Power supply input: 100 ... 240V 50 ... 60 Hz 1.6 A

Power supply output: 24 V 3 ADC

Dimensions: 370 x 300 x 200 mm / 14.5 x 11.8 x 7.8 in (W x L x H)

Lamp lifespan: 5 years / more than 3 million measurements

Display: 7" TFT Display, capacitive Touchscreen

Menu languages: English, Chinese

Operating conditions:

0 ... 40°C / 32 ... 104°F

0 ... 85% relative humidity (non-condensing)

Storage conditions:

-20 ... 50°C / -4 ... 122°F

0 ... 85% relative humidity (non-condensing)

Standards:

CIE No.15, GB/T 3978, GB 2893, GB/T 18833

ISO7724/1, ASTM E1164, DIN5033 part 7

Data storage: 2000 standards, 20000 samples

(One standard contains SCI and SCE)

Data Interface: USB

Weight: 9.6 kg / 21 lbs 2 oz

Repeatability:

Spectral reflection: Φ 25.4 mm / SCI, standard deviation at 0.05% (400 nm ... 700 nm: within 0.04%)

Chromaticity for spectral reflection Φ 25.4 mm / SCI, standard deviation $\Delta E^* ab$ 0.02

Spectral transmittance: Φ 25.4 mm / SCI, standard deviation at 0.05% (400 nm ... 700 nm: within 0.04%)

Chromaticity for spectral transmittance: Φ 25.4 mm / SCI, standard deviation $\Delta E^* ab$ 0.02

Chromaticity accuracies refer to the white calibration standards for 30 measurements in a 5 second interval.

Measuring aperture

Reflective: Φ 30 mm / Φ 25.4 mm, Φ 10 mm / Φ 8 mm, Φ 6 mm / Φ 4 mm;

Permeable: Φ 30 mm / Φ 25.4 mm

Wavelength range: 360-780 nm combined LED lamp, 400 nm cut-off, UV lamp

[Delivery Scope](#)

1 x Spectrophotometer PCE-CSM 30

1 x Blade set consisting of 25.4 mm, 8 mm and 4 mm / 1", 0.31" and 0.15"

1 x Calibration standard white

1 x Calibration standard black

1 x Opaque black plate

1 x Sample holder

1 x 24 V 2 A power supply

1 x USB cable

1 x Software CD

1 x User manual