

# HANDHELD SPECTROPHOTOMET ER SPE72-400A



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Handheld Spectrophotometer is suitable for transmission of various solids colour analysis, fluorescent sample and scientific research.

## SPE72-400A HANDHELD SPECTROPHOTOMETER

D/8° geometric optic a l structure, conforming to CIE N o. 15, GB/T 3978, GB 2893, GB/T

18833, iso7724/1, ASTM e1164, d in 5033 teilT;

Adopt combined LED light source with high life and low power consumption, including UV /excluding UV;

Switch 8mm & 4mm aperture( the flat/ tip measuring aperture can be switched easily, which is suitable for mo re tested sample);

Dual optical path system, the optical resolution in the visible range is less than 10nm, which can measure the SCI and SCE spectrum of the sample at the same time;

Accurate spectrum and lab data, used for color matching and accurate color transmission;

High hardware configuration: 3.5-inch TFT true color screen, capacitive touch screen, 1000 line blazed grating, silicon photocell array detector with large photosensitive area, etc;

USB/Bluetooth dual communication mode, wider ad adaptability;

Super d irt resistant and stable stand ard white calibration board;

Large capacity storage space,which can store more than 30,000pieces of test data;

2/10 stand ard observer's angle, multiple light source modes, multiple surface color systems, meet various standards of chromaticity indicators, and the needs of various customers for color measurement;

Camera locating position and Stabilizer cross measurement position;

PC software has powerful function expansion.

## SPECIFICATIONS

Model	SPE72-400A
Optical Geometry	Reflectance: D/8(Diffuse illumination, 8° acceptance) SCI&SCE; Include UV/Exclude UV
Standards compliant	CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 TeilT
Integrating Sphere Size	Φ 40mm
Light Source	Combined full spectrum LED light source, UV light source
Spectroscopic Method	Flat Grating
Sensor	Silicon photodiode array (40 groups)
Spectral Range	400-700nm
Wavelength Pitch	10 nm
Semi-bandwidth	10 nm
Photometric range	0-200 %
Measurement Aperture	Three calibers: MAV: Φ8mm/Φ10mm; SAV: Φ4mm/Φ5mm; LAV: 1x3mm LAV1x3mm: slightly worse accuracy, can be used for color difference test
Specular Component	SCI&SCE
color spaces	CIE LAB,XYZ,Yxy,LCh,CI E LUV,s-RGB,HunterLab,βxy,DIN Lab99 Munsell(C/2)

Color Difference Formula	$\Delta E^*a, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00, DINA E99, AE(Hunter)$
Other Colorimetric Index	WI(ASTM E313, CIE/ISO, AATCC, Hunter), YI(ASTM D1925, ASTM 313), MI(Metamerism Index), Staining Fastness, Color Fastness, Color Strength, Opacity, 8° Glossiness, 555 tone classification
Observer angle	2° / 10°
Illuminant	D65, A, C, D50, D55, DT5, F1, F2(CWF), F3, F4, F5, F6, F7(DLF), F8, F9, F10(TPL5), F11(TL84), F12(TL83/U30)
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Measurement Time	About 1.5s (Measure SCI & SCE about 3.2s)
Repeatability	Spectral reflectance: MAV/SCI, Standard deviation within 0.08% (400 to 700nm: within 0.18%) Chromaticity value: MAV/SCI, within $\Delta E^*ab$ 0.03 (After calibration, measure the average value of the whiteboard 30 times at 5s intervals)
Inter-instrument error	MAV/SCI, Within $\Delta E^*ab$ 0.15 (Average for 12 BCRA Series II color tiles)
Measurement mode	Single measurement, Average measurement (2-99 times)
Locating Method	Camera Locating, stabilizer cross position
Operating Environment	Temperature: 0-40°C; Humidity: 0-85% (No Condensation) Altitude: less than 2000m
Storage Environment	Temperature: -20-50°C; Humidity: 0-85% (No Condensation)
Standard Accessories	Power Adapter, User Guide, PC Software(Download from office website), USB cable, White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture, 8mm tip aperture, 4mm flat aperture, 4mm tip aperture
Optional Accessory	Micro Printer, Powder test box
Language	Simplified Chinese, English, Traditional Chinese
Battery	Li-ion battery, 6000 measurements within 8 hours
Life lamp	5 years, more than 3 million times measurements.
Screen	3.5-inch TFT color LCD, Capacitive Touch Screen
Interface	USB & Bluetooth
Data storage	Standard: 1,000 Pcs; Sample: 30,000 Pcs. (One PCS can include both SCI and SCE)
Dimension	129(L)X76(W)X217(H)mm
Weight	Approx 600g

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