

BENCHTOP SPECTROPHOTOMET ER SPE71-420



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Benchtop Spectrophotometer is used for measuring the color and appearance of fluorescent, opaque, transparent and translucent samples under various illuminants

SPE71-420 BENCHTOP SPECTROPHOTOMETER

Double Array 256 Image Element CMOS Sensor; Long life-span stable LED UV LED.

With reflective and transmissive spectrum, accurate Lab value, good to calculate color formula and do precise color transmission.

Auto identify measuring aperture. Freely switchable between 3 measuring apertures: Φ 25.4mm/8mm/4mm. Users also can customize apertures.

Built-in temperature sensor to monitor and compensate the measuring temperature to ensure the measurement more precision.

Wavelength range 360nm - 780nm. Built-in 400nm/420nm/460nm cut off Xenon lamp, more professional in UV measurement.

Independent light source detector, continuously monitor the condition of light sources to ensure the light source reliable.

Multiple measurement modes: Quality Management Mode, Sample Mode; Meet more users' requirement.

More powerful extended functions at the PC software.

SPECIFICATIONS

Model	SPE71-420
Illuminant	360nm-780nm Combined LED Lamp, 400nm cut-off, 420nm cut-off, UV Lamp
Sensor	256 Image Element Double Array CMOS Image Sensor
Wavelength Pitch	10 nm
Semiband Width	10 nm
Reflectance Range	0-200%
Measuring Aperture	Reflective : Φ 30mm/ Φ 25.4mm, Φ 18mm/ Φ 15mm, Φ 10mm/ Φ 8mm, Φ 6mm/ Φ 4mm; Transmissive : Φ 30mm, Φ 25.4mm;
Integrating Sphere Size	Φ 154mm
Optical Geometry	Reflectance: d/8 (SCI&SCE; Include UV/Exclude UV) Transmittance: d/0 (SCI&SCE; Include UV/Exclude UV) Conforms to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7
Specular Component	Reflectance: SCI&SCE / Transmittance: SCI&SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,s-RGB,HunterLab, β xy,DIN Lab99
Color Difference Formula	ΔE_{ab} , ΔE_{uv} , ΔE_{94} , $\Delta E_{cmc}(2:1)$, $\Delta E_{cmc}(1:1)$, ΔE_{00} , $DIN\Delta E_{99}$, ΔE_{Hunter}
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, Gardner Index, APHA/Pt-Co Index, 555 Index
Observer	2° / 10°
Illuminants	D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12
Displayed Data	Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
Measurement time	About 2.4s (Measure SCI & SCE about 5s)
Repeatability	Spectral reflectance: Φ 25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%) Chromaticity value: Φ 25.4mm/SCI, Standard deviation within ΔE^*_{ab} 0.01 Spectral Transmittance: Φ 25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%) Chromaticity value: Φ 25.4mm/SCI, Standard deviation within ΔE^*_{ab} 0.02
Inter-instrument Error	Φ 25.4mm/SCI, Within ΔE^*_{ab} 0.15 (Average for 12 BCRA Series II color tiles)

Working Environment	Temperature: 0~40°C; Humidity: 0~85% (No Condensation)
Storage Environment	Temperature: -20~50°C; Humidity: 0~85% (No Condensation)
Language	English and Chinese
Data Storage capacity	Standard 5000 Pcs, Sample 40000 Pcs (one PCS can include both SCI and SCE)
Light Source Device Life	5 years, more than 3 million times measurements.
Screen	7" TFT Capacitive Screen-touch Display
Data Port	USB & Bluetooth
Standard Accessory	White and Black Calibration Board, Checking Green Board, Sample Holder,Φ4 mm,Φ8 mm, Φ15 mm, Φ25.4mm Aperture, Power Adapter,USB Cable, User Guide, PC Software Transmissive Test Clamp Component
Optional Accessory	Micro-printer
Size	370x300x200 mm
Weight	9.6kg
Power Supply	DC 24V, 3A Power Adapter

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