



Portable Spectrophotometer LSP-A41

Portable Spectrophotometer LSP-A41 is powerful performance configuration device which makes color measurement more professional. Offers integrated camera to see the measurement area for accurate test. It features full spectrum LED with high life as the light source, and excellent inter-instrument agreement ensures consistency of the measurement data of multiple device. UV Included/ UV Excluded to measure color and color difference for samples with fluorescence. It Supports 26 kinds of color indexes and 26 kinds of illuminants. Designed with wireless connection with Android or IOS devices via Bluetooth. It greatly expands the application boundary of color spectrophotometer, automatic calibration, magnetic seat charging. It offers the condition of d/8 diffused illumination, 8° viewing, Specular Component Included (SCI) and (SCE) Specular Component Excluded fluorescent samples. It has stable performance, accurate color measurement and powerful function.

Features :

- ❑ Designed with combined LED light source with high life
- ❑ Inter-instrument agreement <0.2 which ensures test results consistency of multiple devices
- ❑ Durable and stable aperture size to measure samples with different sizes
- ❑ UV Included/ UV Excluded to measure color and color difference for samples with fluorescence
- ❑ Integrated camera to see the measurement area for accurate test
- ❑ Offers revolutionary auto calibration technology allows the instrument to achieve automatic calibration
- ❑ Supports 26 kind of illuminants such as D65/D50, etc.
- ❑ Supports 20 kinds of color indexes such as CIE-Lab, CIE-LCh, whiteness, yellowness, opacity, etc.
- ❑ Designed with 256 pixel CMOS sensor
- ❑ Accurate spectrum and lab data, used for color matching and accurate color transmission

- ❑ Auto calibration technology, improves user-experience
- ❑ Multi-function calibration base protest the white tile, combines calibration and charging functions in one
- ❑ USB / Bluetooth dual communication mode, wider adaptability
- ❑ Connection mobile device application to find the similar color from different color swatches
- ❑ PC software has powerful function expansion

Application :

Portable Spectrophotometer is used in plastic electronics, paint and coating, textile printing and dyeing, printing paper, automobile, medical treatment, cosmetics and food industries, as well as scientific research institutions and laboratories etc.

Specifications:

Model	LSP-A41
Optical Geometry	D/8 (diffused illumination, 8° viewing), SCI (Specular Component Included), SCE (Specular Component Excluded)
Integrating Sphere Size	Φ 40 mm
Light Source	LED (Full band balanced LED)
Color Spaces and Indices	Reflectance, CIE-Lab, CIE-LCh, Hunter Lab, CIE Luv, XYZ, Yxy, RGB, Colour difference ($\Delta E \times ab$, $\Delta E \times cmc$, $\Delta E \times 94$, $\Delta E \times 00$), WI (ASTM E313-00, ASTM E313- 73, CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI (ASTM D1925, ASTM E313-00, ASTM E313-73), Blackness (My,dM) , Colour Fastness, Tint,(ASTM E313-00), Colour Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Colour strength
Sensor	256 pixel CMOS sensor

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Wavelength Range	400 to 700 nm
Wavelength Interval	10 nm
Semi band Width	10 nm
Calibration	Auto
Observer Angles	2°,10°
Measured Reflectance Range	0 to 200%
Reflectance Resolution	0.01 %
Measuring Aperture	MAV: Φ8 mm / Φ11 mm MAV: Φ4 mm / Φ6 mm MINI: 1×3 mm
Inter-instrument agreement	$\Delta E \times ab < 0.2$ (BCRA Series II , average measurement of 12 tiles, MAV/SCI)
Repeatability	Chromaticity value: Max.: $dE \times ab < 0.04$ Average: $dE \times ab < 0.03$ Standard deviation within $\Delta E \times ab 0.02$ (when a white tile is measured 30 times at 5-seconds interval) Reflectance: Standard deviation $< 0.1\%$
Illuminant	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84
Observer Angles	2° / 10°
Measuring Time	About 1 s
Storage	APP mass storage
Displayed Data	IPS Full Color Screen, 2.4 inches
Data Port	USB, Bluetooth

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Camera	With
Data Storage	10 years, 1 million tests
Language	English
Pass Metrology	Yes, metrology level I
Software	Android, IOS, Windows
Dimension	77.8 × 53.2 × 185.7 mm
Battery	Rechargeable, 8000 times continuous tests, 3.7V/3000 mAh
Weight	About 300 g

Standard Accessories:

Accessories no.	Name	Qty.
1	Main Instrument	1 pcs
2	Operating Manual	1 pcs
3	Power Cable	1 pcs
4	Charger base	1 pcs