

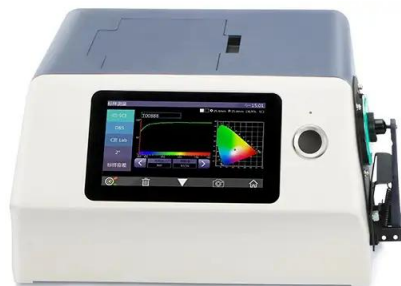


BENCHTOP SPECTROPHOTOMETER BJH1C1 (BBSP-803)

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BENCHTOP GRATING SPECTROPHOTOMETER

A color spectrometer is a hightech device analyzing light's spectral composition to measure color accurately, and uses the latest technology for precise, reliable color measurements. Using diffraction gratings or prisms, it splits light into wavelengths, enabling precise quantification of color parameters like hue, saturation, and brightness. Ideal for ensuring color consistency across materials-from plastic molding to cosmetic pigments-by translating visual color into measurable data.



High configuration of hardware: 7 inches TFT Color Capacitive Touchscreen Display; Bluetooth 2.1; Concave Grating.
Double Array 256 Image Element CMOS Sensor; Long lifespan 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 4 measuring apertures: $\phi 25.4\text{mm}/15\text{mm}/8\text{mm}/4\text{mm}$. Users also can customize apertures.
Builtin temperature sensor to monitor and compensate the measuring temperature to ensure the measurement has more precision.
Wavelength range 360nm - 780nm. Builtin 400nm cut off/420nm cut off/460nm cut off (only xenon lamp edition), more professional in UV measurement.
Independent light source detectors continuously monitor the condition of light s

SPECIFICATIONS

Model	BJH1C1
Old Model	BBSP-803
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
Integrating Sphere Size	$\phi 154\text{ mm}$
Illuminant	360 nm-780 nm Combined LED Lamp, 400 nm cutoff, 420 nm cutoff, UV Lamp
Sensor	256 Image Element Double Array CMOS Image Sensor
Wavelength Pitch	10 nm
Semiband Width	5 nm
Reflectance Range	0-200%
Measuring Aperture	Reflective: $\phi 30\text{ mm}/\phi 25.4\text{ mm}$, $\phi 18\text{ mm}/\phi 15\text{ mm}$, $\phi 10\text{ mm}/\phi 8\text{ mm}$, $\phi 6\text{ mm}/\phi 4\text{ mm}$; Transmissive: $\phi 30\text{ mm}/\phi 25.4\text{ mm}$;
Specular Component	Reflectance: SCI & SCE Transmittance: SCI & SCE
Color Space	CIE LAB, XYZ, Yxy, LCh, CIE LUV, sRGB, HunterLab, βxy , 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/ PtCo Index, 555 Index, Haze (ASTM D1003), Saybolt, Color code (ASTM D1500)
Observer	$2^\circ / 10^\circ$
Illuminants	D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,DLF,TL83,TL84,TPL5,U30
Displayed Data	Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Measurement time	About 2.4 s (simultaneous measurement SCI/SCE about 5 s)
Repeatability	Spectral reflectance: $\phi 25.4\text{ mm}/\text{SCI}$ - Standard deviation within 0.04% (400-700 nm: within 0.04%);Chromaticity value: $\phi 25.4\text{ mm}/\text{SCI}$ - Standard deviation within ΔE^*_{ab} 0.01;Spectral Transmittance: $\phi 25.4\text{ mm}/\text{SCI}$ - Standard deviation within 0.05% (400-700 nm: within 0.04%);Chromaticity value: $\phi 25.4\text{ mm}/\text{SCI}$ -Standard deviation within ΔE^*_{ab} 0.02
Interinstrument Error	$\phi 25.4\text{ mm}/\text{SCI}$ Within ΔE^*_{ab} 0.12 (Average for 12 BCRA Series II color tiles)
Size	370x300x200 mm

Weight	9.6 kg
Power Supply	DC 24 V, 3 A Power Adapter
Light Source Device Life	5 years; more than 3 million times measurements.
Screen	7" TFT Capacitive Screentouch Display
Data Port	USB & Bluetooth
Data Storage Capacity	Standard: 5000 Pcs; Sample: 40000 Pcs. (One PCS can include both SCI and SCE)
Language	Simplified Chinese, Traditional Chinese, English (Optional customized German, French and Spanish)
Working Environment	Temperature: 0-40°C; Humidity: 0-85% (No Condensation)
Storage Environment	Temperature: -20-50°C; Humidity: 0-85% (No Condensation)
Standard Accessory	Power Adapter, User Guide, CD Disk (PC Software), USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4 mm caliber, 15 mm caliber, 8 mm caliber, 4 mm caliber, Transmissive Test Component, Micro Aperture (4 mm) transmission test clamp component
Optional Accessory	Microprinter
Alt Name	Benchtop Grating Spectrophotometer

FEATURES

High configuration of hardware: 7 inches TFT Color Capacitive Touchscreen Display; Bluetooth 2.1; Concave Grating. Double Array 256 Image Element CMOS Sensor; Long lifespan stable LED, UV LED.

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Builtin temperature sensor to monitor and compensate the measuring temperature to ensure the measurement has more precision. Wavelength range 360nm - 780nm. Builtin 400nm cut off/420nm cut off/460nm cut off (only xenon lamp edition), more professional in UV measurement.

Independent light source detectors continuously monitor the condition of light sources to ensure the light source is reliable.

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

A variety of optional accessories: Reflection sample holding tool, transmission fixture, micro 4mm aperture transmission test components, instrument inversion test components, applicable to more working conditions;

Big capacity data storage, for 40000 pieces test result.

Builtin camera locating.

More powerful extended functions at the PC software.



Next Generation Benchtop Spectrophotometer with Advanced Functionality and Enhanced Usability.



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Big capacity data storage, for 20000 pieces test result.

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APPLICATIONS

A benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories, allowing the user to color measurement most applications including powders, liquids, gels, pastes, granules and solid materials. It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.



Plastic



Hardware



Printing



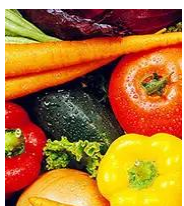
Paint



Textile



Laboratory



Food



Cosmetics

A benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories. It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.



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