HANDHELD SPECTROPHOTOMETER BJH1D1 (BHSP-904)

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GRATING SPECTROPHOTOMETER

It inherits the core technology of large area array sensor and grating splitting in the field of color detection, and acutely analyzes the strong and weak light in 3001100nm band.It has always been imitated, but never surpassed. The spectrophotometer is a compact, portable color measurement device designed for fast and accurate color analysis. Equipped with a single-beam optical system, it offers reliable performance for basic color evaluation in various industries, widely used for testing the color of different materials such as dental, printing, plastic, fruit, textile, car, etc.

Double 32 array sensor:
spectral range of 360-780 nm
Support standard color spaces like CIE LAB, XYZ, and sRGB
D/8 geometry (SCI/SCE)
Good repeatability (ΔEab ≤0.02) and interinstrument agreement (ΔEab ≤0.15)
Large area photodiode array (dual 32 arrays) sensor:
A larger area of double 26 array sensor, strong light saturation, weak light sensitivity and a wider spectrum response range, to ensure the instrument measurement speed, accuracy, stability and consistency, independent core technology, and international standards of the same platform, to achieve complete compatibility.
Adopt D/8 structure and SCI/SCE mode:
Spectrophotometer uses a widely used international use D/8 optical structure, SC
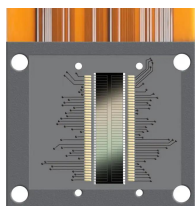
SPECIFICATIONS

Model	BJH1D1
Old Model	BHSP-904
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, ISO77241, ASTM E1164, DIN5033 Teil7
Integrating Sphere Size	Φ40 mm
Light Source	Combined full spectrum LED light source, UV light source
Spectroscopic Method	Flat Grating
Silicon photodiode array	Double row 32 groups
Spectral Range	360-780 nm
Wavelength Pitch	10 nm
Photometric Range	0-200%
Measurement Aperture	Five apertures: MAV: φ8 mm/φ10 mm; SAV: φ4 mm/φ5 mm; LAV: 1x3 mm
Specular Component	SCI & SCE
Color Spaces	CIE LAB, XYZ, Yxy, LCh, CIE LUV, sRGB, Hunter Lab, βxy, DIN Lab99, Munsell (C/2)
Color difference formulas	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00, DINΔE99, ΔE(Hunter)
Other Colorimetric Index	Spectral reflectance; WI (ASTM E313, CIE/ISO, AATCC, Hunter, TaubeBergerStensby); YI (ASTM D1925, ASTM 313); Metamerism Index Mt; Color fastness; strength (dye/tinting); opacity; 8° glossiness; 555 hue classification; blackness (My, dM); color density CMYK (A, T, E, M), Tint; color density; Munsell (some functions via PC software)
Observer Angle	2°/10°
Illuminant	D65, A, C, D50, D55, D75, F1, F2 (CWF), F3, F4, F5, F6, F7 (DLF), F8, F9, F10 (TPL5), F11 (TL84), F12 (TL83/U30), B, U35, NBF, ID50, ID65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2, LED-C2, LED-C3, LED-C5; customizable light source (41 kinds of light sources in total, some via PC software/APP)
Displayed Data	Spectrogram/Data, Sample Colorimetric Value, Color Difference Value/Graph, PASS/FAIL Results, Color Simulation, Color Bias
Measurement Time	About 1.5 s

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Repeatability	Chromaticity value: (MAV/SCI): ΔE*ab ≤ 0.02 (After warmup correction, measure the average value of the white board 30 times at an interval of 5s) ;Spectral reflectance: (MAV/SCI),Standard Deviation ≤ 0.08% (400-700 nm ≤ 0.18%)
Inter-instrument agreement	MAV/SCI within ΔE*ab 0.15 (Average for 12 BCRA Series II color tiles)
Display accuracy	0.01
Measurement Mode	Single measurement; Average measurement (2-99 times)
Locating Method	Camera locating; stabilizer cross position
Dimension & Weight	129 x 76 x 217 mm; Approx 600 g
Battery	Lithium battery, 3.7 V, 5000 mAh; 8800 times within 8 hours
Lamp Life	More than 1.5 million measurements in 10 years
Screen	3.5-inch TFT color LCD; Capacitive Touch Screen
Interface	USB, Bluetooth
Data storage	Standard: 1000 pcs; Sample: 30,000 pcs (one data can include SCI/SCE at the same time); APP/PC mass storage
Software support	Android, iOS, Windows, WeChat applet, Hongmeng
Languages	Simplified Chinese, English, Traditional Chinese
Standard Accessories	Power Adapter; User Guide; PC Software (download from office website); USB cable; White & Black Calibration Cavity; Protective Cover; Wrist strap; Five apertures .
Alt Name	Grating Spectrophotometer

FEATURES

Double 32 array sensor:
spectral range of 360-780 nm
Support standard color spaces like CIE LAB, XYZ, and sRGB
D/8 geometry (SCI/SCE)
Good repeatability (ΔEab ≤0.02) and interinstrument agreement (ΔEab ≤0.15)
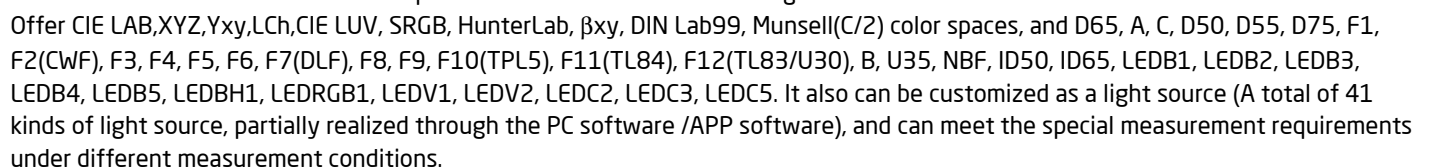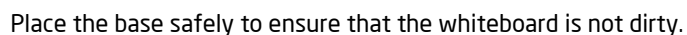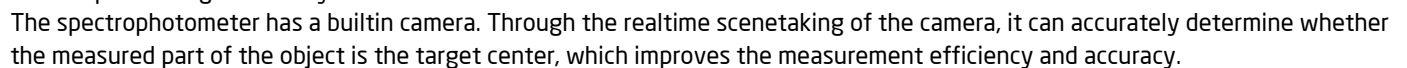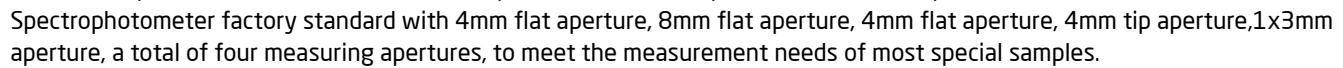

Large area photodiode array (dual 32 arrays) sensor:
A larger area of double 26 array sensor, strong light saturation, weak light sensitivity and a wider spectrum response range, to ensure the instrument measurement speed, accuracy, stability and consistency, independent core technology, and international standards of the same platform, to achieve complete compatibility.

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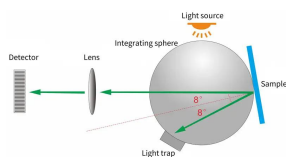
Spectrophotometer uses a widely used international use D/8 optical structure, SCI/SCE (Specular Component Included/Specular Component Excluded) synthesis technology, supports SCI+SCE at the same time fast measurement, test time about 1.5 seconds.

Equipped with four kinds of measuring apertures:

It is equipped with five types of measuring apertures, which can meet the measurement needs of different sizes of samples, and is suitable for precise color measurement of samples with different specifications and shapes.

Spectrophotometer factory standard with 4mm flat aperture, 8mm flat aperture, 4mm flat aperture, 4mm tip aperture,1x3mm aperture, a total of four measuring apertures, to meet the measurement needs of most special samples.

Camera positioning can clearly observe the measured area

The spectrophotometer has a builtin camera. Through the realtime scenetaking of the camera, it can accurately determine whether the measured part of the object is the target center, which improves the measurement efficiency and accuracy.

Noncontact automatic calibration, professional imported white board, more wearresistant, dirty, stable

Place the base safely to ensure that the whiteboard is not dirty.

Offer 10 kinds of color measurement space and 41 kinds of observation light source:

Offer CIE LAB,XYZ,Yxy,LCh,CIE LUV, SRGB, HunterLab, βxy, DIN Lab99, Munsell(C/2) color spaces, and D65, A, C, D50, D55, D75, F1, F2(CWF), F3, F4, F5, F6, F7(DLF), F8, F9, F10(TPL5), F11(TL84), F12(TL83/U30), B, U35, NBF, ID50, ID65, LEDB1, LEDB2, LEDB3, LEDB4, LEDB5, LEDBH1, LEDRGB1, LEDV1, LEDV2, LEDC2, LEDC3, LEDC5. It also can be customized as a light source (A total of 41 kinds of light source, partially realized through the PC software /APP software), and can meet the special measurement requirements under different measurement conditions.

APPLICATIONS

Spectrophotometer is equipped with 5 kinds of measuring apertures, with wider adaptability, accurate color measurement and stable performance. It is used for accurate color measurement and quality control in dentistry, plastic electronics, paint ink, textile and garment printing and dyeing, printing, ceramics and other industries, and can be used for fluorescent sample measurement.

Precise Tooth Shade Determination:
It was developed for precise, fast and reliable shade determination of natural teeth and ceramic restorations. Highprecision spectrophotometer technology accurately determines tooth shade. It does so objectively and reproducibly, regardless of ambient light conditions. For greater process reliability and fewer complaints.

Biolab Scientific Ltd.

Trillium Executive Center, East Tower, 675 Cochrane Dr, Markham, Ontario L3R 0B8, Canada
Email: info@biolabscientific.com | Website: www.biolabscientific.com