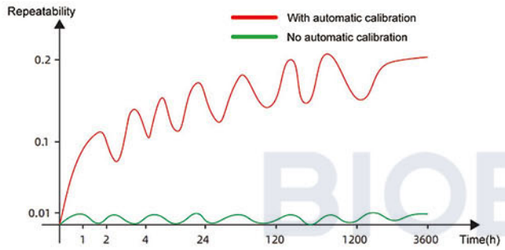
Benchtop Grating Spectrophotometer

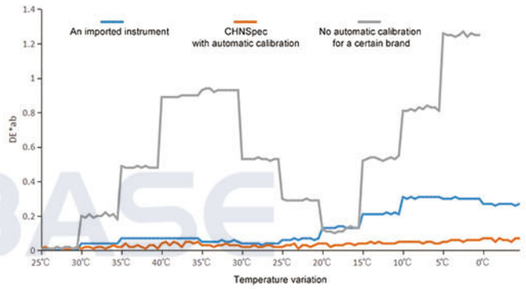


Introduction:

The instrument is the bench-top spectrophotometer with excellent repeatability, which is with auto calibration function to guarantee the short term and long-term repeatability even after drastic changes in the environment. Advanced automatic calibration technology greatly improves long-term repeatability of instruments. Under constant temperature, the dE*ab of day 1 and day 30 can still reach 0.015. At any temperature change from 0℃ to 40℃, dE*ab can reach less than 0.1.



Long-term repeatability curve under constant temperature conditions



0~40℃ temperature change, repeatability curve

Features:

* High precision automatic calibration, excellent long-term repeatability, ensure excellent measurement repeatability even after environment changes
* It has two lamps: pulsed xenon and LED
* 24 kinds of illuminants and more than 40 measurement indices
* Temperature and humidity compensation function
* 7-inch touch screen, Android operate system
* Dual optical paths spectrum analysis technology
* Support SCI+SCE simultaneous rapid measurement

Technical Parameters:

Model	BK-GS821
Optical Geometry	Reflectance: d/8(Diffused illumination, 8-degree viewing) Simultaneous measurement of SCI/SCE, conform to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, DIN5033 Teil7, JIS Z8722 condition C, ASTM E1164, ASTM-D1003-07 Transmittance d/0(Diffused illumination, 0-degree viewing)
Integrating Sphere Size	152mm
Light Source	Pulse Xenon lamp and LED lamp
Spectrophotometric Mode	Concave Grating
Sensor	Silicon Photodiode Array
Wavelength Range	360~780nm
Wavelength Interval	10nm
Measured Reflectance Range	0-200%, resolution 0.01%

Measuring Aperture	Reflectance: XLAV Φ25.4mm/Φ30mm, LAV Φ15mm/Φ18mm, MAV Φ8mm/Φ11mm, SAV Φ3mm/Φ6mm Users can customize the caliber, automatic identification of caliber switching Transmittance: Φ17mm/Φ25mm
Color Space	CIE LAB, CIE LUV, LCh, Hunter Lab, Yxy, XYZ, Musell, s-RGB, βxy
Color Difference Formula	ΔE*ab, ΔE*CH, ΔE*uv, ΔE*cmc, ΔE*94, ΔE*00, ΔEab(Hunter), 555 color classification
Other Colorimetric Index	WI(ASTM E313-00,ASTM E313-73,CIE,ISO2470/R457, AATCC, Hunter, Taube Berger, Stensby),YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Tint(ASTM E313-00),Metamerism index milm, Stain fastness, Color fastness, ISO brightness, R457, A density, T density, E density, M density, APHA/Pt-Co/Hazen, Gardner, Saybolt, ASTM color, Haze, Total Transmittance, Opacity, Color Strength
Observer Angle	2° and 10°
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, ID50, ID65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2
Displayed Data	Spectral data, spectral graph, chromaticity data, color difference data, color difference graph, pass/fail judgment, simulated color, color evaluation, haze, liquid chromaticity, color bias
Measuring Time	Single mode < 2s
Repeatability	ΔE*ab≤0.015, Spectral reflectance/transmittance≤0.1%
Inter-instrument Error	XLAV ΔE*ab 0.2
Display	7-inch capacitive touch screen
Spectral Resolution	1.6nm
UV Measurement	Including UV, 400nm cutoff, 420nm cutoff, 460nm cutoff
Transmission Measurement Specification	Sample height and thickness: unlimited height, thickness ≤50mm
Long Term Repeatability	XLAV chromaticity value: standard deviation ΔE*ab within 0.015 (Any temperature change at 20°C±10°C, measure the white calibration plate every hour within 24 hours)
Data Storage	8 GB
Language	Simplified Chinese, English, Traditional Chinese, Russian, Spanish, Portuguese, Japanese, Thai, Korean, German, French, Polish
Operation System	Android
Operating Temperature &Humidity Range	5~40℃ (40~104F), relative humidity 80% (at 35℃) no condensation
Storage Temperature &Humidity Range	-20~45℃ (-4~113F), relative humidity 80% (at 35℃) no condensation
Standard Accessories	Power adapter, data cable, transmission fixture, USB flash disk, Black cavity, white board, green board, 30mm aperture,18mm aperture, 11mm aperture, 6mm aperture, support table, colorimetric dish, damping handle
Optional Accessories	Heating Fixture for Transmittance, Vertical Support and Pneumatic ram for downward measurement, Reflectance fixture for small size sample, Reflectance Glass Cell Support, Corrosion-Resistant Protective Plate (non-removable), Sample Holder for Fiber, Film Fixture, Transmittance Fixture for Small Aperture, Trolley Case, European Standard Plug, American Standard Plug
Interface	RS-232, USB, USB-B
Other Function	1. Camera to view measurement area 2. Support horizontal, vertical and downward measurement method (need optional accessories to support for downward measurement) 3. Auto humidity and temperature compensation function
Power Supply	AC100~240V, 50/60Hz, DC regulated power supply
Packing Size	450*570*470mm
Gross Weight	16kg