

Spectral Colorimeter (Color Difference Meter)

The BGD 552 Series Spectral Colorimeter is the latest generation of high-precision colorimeter developed by Biuged. It adopts a dual-optical-path design, which monitors light source energy fluctuations while measuring sample signals, reducing interference and achieving higher measurement stability. The repeatability index is improved to $\Delta E^*ab \leq 0.03$, ensuring high standards in measurement speed, accuracy, stability, and inter-instrument consistency.

Additionally, this instrument utilizes an innovative nano-integrated optical component with a thickness of only 5 micrometers as the spectroscopic device, achieving nanometer-level spectral resolution, significantly enhancing color measurement precision.

Features:

◆ Ultra-High Repeatability ($\Delta E^*ab \leq 0.03$) & Outstanding Inter-Instrument Consistency ($\Delta E^*ab \leq 0.3$) Certified Grade 1 Metrology

Repeatability is a critical performance indicator for color difference meters. The BGD 552 employs an advanced optoelectronic testing system and undergoes rigorous calibration to achieve unmatched repeatability. Furthermore, it uses BCRA standard ceramic tiles for color calibration and traceability, combined with superior craftsmanship, ensuring exceptional inter-instrument consistency.

◆ Powerful & Convenient Calibration Function

The BGD 552 requires no frequent manual calibration. Simply place it on the calibration base, and the instrument will automatically adjust based on environmental conditions, ensuring optimal performance at all times.

The calibration base features a zirconia (ZrO_2) white tile (Mohs hardness 9, comparable to diamond), which is highly resistant to scratches and unaffected by temperature/humidity changes. Compared to competitors using standard ceramic or plastic tiles, this ensures superior long-term stability and durability.

◆ Multiple Measurement Parameters Meeting Diverse Industry Standards

40+ light sources (A, B, C, D50, D55, D65, etc.)

30+ measurement indices, including: Spectral reflectance, CIE-Lab, CIE-LCh, ΔE^*ab , Hiding power, whiteness, yellowness, etc.

◆ Versatile Measurement Adaptability

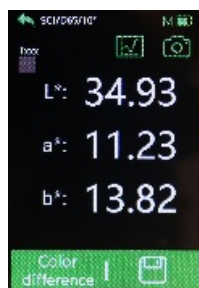
The BGD 552/2 supports 6 measurement apertures for different sample sizes:

Stable Type: $\Phi 11mm + \Phi 6mm + \Phi 3mm$

Dexterous Type: $\nabla 11mm + \nabla 6mm + \nabla 3mm$

◆ Built-in HD Camera for Precise Positioning (BGD 552/2 Only)

The BGD 552/2 features a high-definition camera to visually confirm the measurement area, preventing errors caused by misalignment.



BGD 552/2 supports 6 measurement apertures for different sample sizes

Technical Parameters	Ordering Information	
	BGD 552/1 Basic Spectral Colorimeter	BGD 552/2 Premium Spectral Colorimeter
Standards	CIE No.15, ISO7724-1, ASTM E1164, DIN5033-7 etc.	
Illuminating/Viewing Geometry	8° /d	
Integrating Sphere Dia.	40mm	
Measurement Targets	Spectral Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE-Luv, XYZ, Yxy, RGB, Color Difference (ΔE^*ab , ΔE^*cmc , ΔE^*94 , ΔE^*00), Whiteness Index/WI (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, Hunter, Taube Berger Stensby) , Yellowness Index/YI (ASTM D1925, ASTM E313-00, ASTM E313-73) , Blackness/My&dM, Staining Fastness, Color Change Fastness, Tint (ASTM E313-	
Illumination	A, B, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, U35, DLF, NBF, TI83, TI84, Id50, Id65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2	
Light Source	LED+UV	
Observer	2° ,10°	
Display Screen	3.5"colorful touch screen	
Spectroscopic Method/Sensor	Nano-integrated spectroscopic device / Silicon photodiode array, dual 16-channel	
Wavelength Range/Interval	400nm ~ 700nm (user can view reflectance at 31 wavelengths) / 10nm	
Measuring Aperture	Φ 11mm	Three types: Φ 11mm, Φ 6mm, Φ 3mm (Available in both rounded-stable type and pointed-dexterous type for user selection)
Measurement Mode	SCI	SCI & SCE
Positioning with Camera	×	✓
Light Source Lifetime	10 years or one million times	
Reflectance Range/Resolution	0~200% / 0.01%	
Software	Andriod, iOS, Windows, App	
Measurement Mode/ Measurement Time	Single measurement, Average Measurement (2~99 times) / Approx. 1 second	
Display Resolution	0.01	
Data Storage Capacity	Onboard Memory: 10,000 measurement records; APP Support: Cloud-based unlimited storage	
Net Weight/Package Weight	0.6 KG / 2.2 KG	
Power Supply	Rechargeable lithium-ion battery, 3.7V/3000mAh, Single charge enables up to 8,000 consecutive measurements.	
Language	English/Chinese	
Data Interface	USB, Bluetooth	
Optional Accessories	BGD 1390---Special test box for powder BGD 1391/A---Universal Test Components BGD 1393/A---Mini Printer	



BGD 1390
Special test box for powder



BGD 1393/A
Mini Printer



BGD 1391/A
Universal Test Components