

Professional Spectrophotometer

DC-56 series



Professional-grade accuracy,
every measurement is worth trusting



◆ Product Advantages | Why choose the DC-56 series spectrophotometer?

- ◆ Outstanding stability: Repeatability up to 0.03, delivering highly consistent and reliable results
- ◆ Multiple aperture options: Equipped with $\Phi 11$ mm, $\Phi 6$ mm, and $\Phi 3$ mm apertures, one instrument handles both large and small samples
- ◆ Comprehensive index analysis: Built-in dozens of indices such as color difference, whiteness, yellowness, etc., meeting multi-industry needs
- ◆ Dual light source configuration: Full-spectrum LED + UV light source, accurate measurement of conventional / fluorescent materials
- ◆ Cross-platform operation: Supports Android / iOS / Windows / WeChat for convenient operation
- ◆ Visual positioning: High-definition camera-assisted positioning + 3.5-inch touch screen, what you see is what you measure

- ◆ Massive storage: Instrument stores 10,000 data records, APP provides cloud storage, worry-free data management
- ◆ Ultra-long endurance: Up to 8,000 measurements on a full charge, easily meeting long-duration, high-frequency usage needs



Model Comparison Table | What are the differences between the three models?

Product Model	Spectrophotometer DC-50	Spectrophotometer DC-52	Spectrophotometer DC-56
Measurement Aperture	Φ11mm	Φ11mm+Φ6mm	Φ11mm+Φ6mm+Φ3mm
Illumination Light Source	Full-spectrum LED light source		
Measurement Viewing Method	Visual	Camera	

Technical Parameters

Product Model	Spectrophotometer DC-50	Spectrophotometer DC-52	Spectrophotometer DC-56
Measurement Geometry*	D/8,SCI+SCE		

Measurement Repeatability**	dE*ab≤0.03				
Display Accuracy	0.01				
Measurement Aperture	Φ11mm	Φ11mm+Φ6mm	Φ11mm+Φ6mm+Φ3mm		
Measurement Indices	Spectral reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE-Luv, XYZ, Yxy, RGB, Color difference (ΔE_{ab} , ΔE_{cmc} , ΔE_{94} , ΔE_{00}), Whiteness (ASTM E313-00, ASTM E313-73, CIE, ISO2470/R457, AATCC, Hunter, Taube Berger Stensby), Yellowness (ASTM D1925, ASTM E313-00, ASTM E313-73), Blackness (My, dM), Staining fastness, Color change fastness, Tint (ASTM E313-00), Color density CMYK (A, T, E, M), Metamerism index Milm, Munsell, Hiding power, Strength (dye strength, tinting strength)				
Illuminant Conditions	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				
Illumination Light Source	Full-spectrum LED light source		Full-spectrum LED light source + UV		
Measurement Viewing Method	Visual	Camera			
Software Support	Android, iOS, Windows, WeChat Mini Program				
Field of View Angle	2°, 10°				
Integrating Sphere Diameter	40mm				
Compliance Standards	CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7				
Spectral Method	Nano-integrated spectrometer device				
Detector	Silicon photodiode array, dual 16 groups				
Wavelength Interval	10nm				
Wavelength Range	400–700 nm (users can view reflectance at 31 wavelengths)				
Reflectance Measurement Range	0-200%				
Reflectance Resolution	0.01%				
Measurement Mode	Single measurement, average measurement (2–99 times)				
Measurement Time	Approximately 1 second				
Interface	USB, Bluetooth				
Screen	Full-color screen, 3.5-inch touch screen				
Battery Capacity	Up to 8,000 continuous measurements per charge, 3.7 V / 3000 mAh				
Light Source Lifetime	5 years / 3 million measurements				
Language	Simplified Chinese, English				
Storage	Instrument: 10,000 records; APP: massive cloud storage				

* Diffuse illumination / 8° viewing, including specular reflection / excluding specular reflection

** Standard deviation of 30 whiteboard measurements at 5-second intervals after whiteboard calibration

Application Field



Textile Industry: From the ruggedness of denim to the smoothness of silk, how can color accuracy across different fabrics be ensured? This series of color difference meters adopts the internationally accepted D/8 optical structure, fearlessly handling challenges of fabric texture and gloss, accurately reproducing true colors. Built-in multiple color fastness evaluation standards allow your products to easily meet international requirements. One full charge supports 8,000 measurements, perfectly suited for high-intensity, high-frequency work from incoming inspection to outgoing quality control, eliminating returns and losses caused by color differences.



Coatings Industry: Say goodbye to customer complaints caused by batch color differences. The DC-56 series features laboratory-grade measurement accuracy with $\Delta E^*ab < 0.03$, ensuring every batch of coating you formulate precisely matches the standard sample. The flexible multi-aperture design easily handles both small sample color matching and large-area coating inspection. The unique LED + UV dual light source accurately evaluates the effect of fluorescent brighteners, keeping product colors consistently stable and outstanding in quality.



Plastics Industry: The color of plastic products is the first impression of brand quality. This series of color difference meters can deeply analyze key indicators such as reflectance and hiding power, controlling raw material quality from the source. High-definition camera-assisted positioning makes the measurement area clear at a glance, completely avoiding human error. Powerful APP cloud storage enables all color data to be traceable, manageable, and shareable, establishing a solid digital quality system for large-scale production.

Optional Accessories

Material Code	Name	Reference	Image
3.07.04.2017-0	800 Quartz Cylindrical Cuvette (Dimensions φ 64 \times 15 mm, wall thickness 2 mm)		
3.07.04.2003-0	800 Quartz Cylindrical Cuvette (Outer dimensions φ 32 \times 41 mm, wall thickness 1.5 mm)		