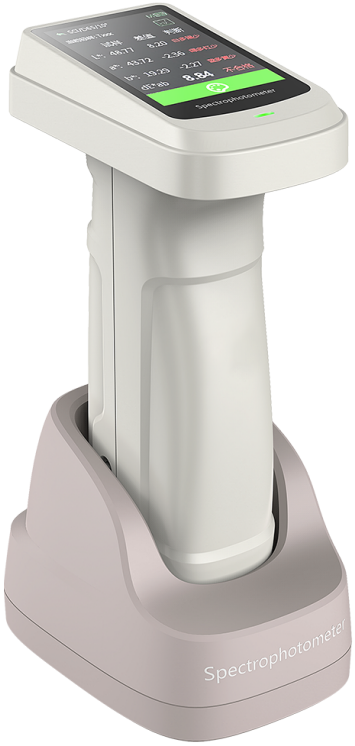
Spectrophotometers



Models: S-700A/700D/700E

Overview

The Vteke S-700 series spectrophotometers are known for their great value and support multiple color spaces such as Lab, LCh, XYZ, Yxy, and more. These instruments are currently our most precise handheld sphere spectrophotometers, with a repeatability of dE*ab ≤ 0.02. Ideal for laboratory color analysis, on-site evaluations, and QC inspections, they are widely used across industries like plastics, coatings, automotive, and printing for high-standard color management.

- Repeatability of dEab ≤ 0.02
- Inter-instrument agreement ΔEab ≤ 0.25
- Multiple measurement apertures to accommodate different sample sizes
- Can connect to both computers and smartphones
- 400-700nm full-spectrum balanced LED light source and UV light source
- Intelligent automatic calibration
- Dual-column high precision CMOS array sensor
- Verified to meet national first-level metrology standards.
- 10nm resolution grating spectrophotometry technology
- Over 30 measurement parameters, 37 types of evaluation light sources
- The camera viewfinder is used for precise measurement positioning.

Excellent Repeatability and Inter-Instrument Agreement

The dual optical path array sensor design monitors light source energy fluctuations while measuring sample signals, effectively reducing interference and enhancing measurement stability. The instrument achieves a measurement repeatability index of dE*ab ≤ 0.02, a level unmatched by similar products. The large dual array sensors enhance spectral response sensitivity, ensuring high standards of measurement speed, accuracy, stability, and inter-instrument consistency.

Innovative Concave Grating Optical Path Structure

This is our second core technology, using a concave grating to achieve spectral resolution better than 10nm, greatly enhancing the technical performance of the product and making color measurement more precise.

30+ Indicators and 37 Light Sources

It includes over 30 measurement indicators that comply with international standards, such as RGB, Lab, ΔEab, etc.; as well as 37 types of evaluation light sources, like A, D50, D65, etc., covering almost all the measurement indicators and light source types used in the industry. These can be flexibly added or removed via mobile or PC applications.

"Artificial Diamond" — Calibration Whiteboard

This instrument features automatic calibration; just place it on the calibration base to activate. The calibration board is made from zirconium dioxide, known as 'artificial diamond,' with over 90% reflectivity. It is highly durable and weather-resistant, maintaining its appearance without scratching or discoloration even after extended use.

UV - for Measuring Fluorescent Colors

Full-spectrum balanced LED and UV light sources are used for illumination, ensuring ample spectral distribution within the visible and ultraviolet light ranges. Even materials containing fluorescent components can be effectively measured.

Various Apertures

To meet the needs of different samples, we offer a variety of measurement apertures to choose from. You can easily switch the measurement aperture without tools, making the process simple and convenient. The stable type includes Φ11mm, Φ10mm, Φ6mm, Φ5mm, Φ3mm, Φ13mm; and the agile type includes: ▽11mm, ▽10mm, ▽6mm, ▽5mm, ▽3mm, ▽13mm.

Built-In HD Camera for Clear and Confident Measurements

The S-700 series spectrophotometer has a built-in HD camera that clearly displays the measurement area on the screen. This feature makes testing more reliable and helps ensure the accuracy of measurements, preventing errors.

Connecting Smartphone and Computer

Our apps, available for both iOS and Android, allow you to create a color database. You can log details of various color cards, search for similar colors, and upload and share data. The package also includes the ColorExpert color management system, which connects to computers running the Windows operating system via Bluetooth or USB. It features four key functions: My Colors, Color Measurement, Color Matching System (available for purchase), and Personal Center.

Specifications

Model	S - 700A	S - 700D	S - 700E
Geometry	d/8, SCI+SCE (diffused illumination,8° viewing, Specular Component Included, Specular Component Excluded)		
Repeatability	ΔE*ab ≤ 0.025	ΔE*ab ≤ 0.02	
Inter-instrument agreement	ΔE*ab ≤ 0.25	ΔE*ab ≤ 0.25	ΔE*ab ≤ 0.2
Display Precision	0.01		
Illumination Area/Apertures	Φ11mm，Φ6mm，▽11mm，▽6mm，	Φ11mm，Φ6mm，Φ3mm，1*3mm ▽11mm，▽6mm，	Φ11mm，Φ10mm，Φ6mm，Φ5mm，Φ3mm，1*3mm ▽11mm，▽10mm，
Color Spaces and Indices	Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB, Color difference(ΔE*ab, ΔE*cmc, ΔE*94,ΔE*00),WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Blackness(My,dM),Color Fastness, Tint,(ASTM E313-00),Color Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Color strength.		
Illuminants	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.		
Light Source	Full wavelength balanced LED		Full wavelength balanced LED + UV
Measurement observation	Visual inspection	Camera	
Calibration	Intelligent auto calibration		
Software	Android, IOS, Windows		
Observer Angles	2°,10°		
Sphere Size	40nm		
Standards	Conform to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724-1, ASTM E1164, DIN5033 Teil7		
Spectroscopic method	Grating spectroscopy		
Sensor	Array sensor	Dual-row high-precision CMOS array sensor	
Wavelength Interval	10nm		
Wavelength Range	0-200%		
Reflectance Resolution	0.01%		
Measurement Time	≈ 2 seconds	≈ 1 seconds	
Interface	USB, Bluetooth		
Screen	IPS Full Color Screen,3.5 inches		
Battery	Li-ion, rechargeable, 8000 times continuous tests, 3.7V/3000mAh		
Lamp Lifetime	10 years, 1 million tests		
Languages	Chinese and English		
Storage Memory	Instrument: 100 standard samples, 10,000 test samples; APP: Massive storage.		

- Diffuse illumination with D/8° directional reception, including/excluding specular reflection.
- Standard deviation of measuring a whiteboard 30 times with 5-second intervals after whiteboard calibration.
- BCRA Series II, average measurement of 12 tiles.

Vteke Instruments Co., Limited | www.vteke.com
Address：7th Floor, Lingxiang Building, Hangcheng Avenue, Xixiang, Bao'an District, Shenzhen, China (Post Code: 518126)
Mobile / WhatsApp：+86 13590108052 Tel：+86 755 23059722 Email: info@vteke.com