Introduction

Portable Spectrophotometer CS-500/520

Hangzhou CHNSpec Technology Co., Ltd

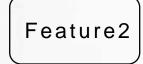






ColorSpec for High Accuracy Color Test

 It can pass Level I of National Institute Metrology
Spectrophotometer, 20 kinds of color spaces, 26 kinds of illuminants





Excellent Inter-instrument Agreement and Repeatability

Level I national institute metrology Repeatability < 0.03* Inter-instrument agreement < 0.2 Ensures test results consistency of different devices

Auto Calibration

Feature 3

The revolutionary auto calibration technology allows the instrument to achieve automatic calibration, which greatly improves the user experience.





Connect to APP to expand more functions

Connect to APP to find the similar color from different color swatches.

Personal color database can also be established

Samples saved in cloud can be set into target for color difference test



White Tile Top Quality Ceramic

Brightness > 98 | Wear-resistant | Unchanging Color

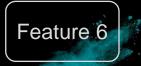
Multi-function Calibration Base

Combine calibration and charging in one base

When instrument is placed on the base, it will be automatically charged and calibrated which saves a lot of time for user.







Switchable Apertures

Durable and stable aperture sizes to measure samples with different sizes



Spectrophoton

Camera to see the measurement area

Integrated camera to see the measurement area for accurate test

Excellent Appearance Design

✓ One-piece body, streamlined appearance

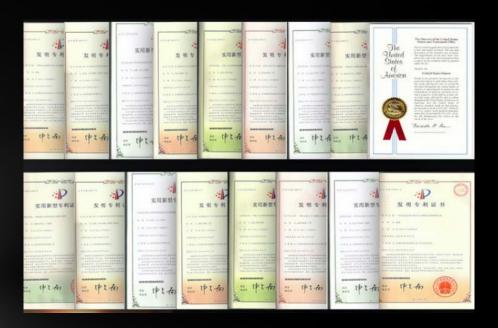
Ergonomic design

Vertical design, vertical placement not only saves space but is more stable



Patented Technology

26 National Patents





Color Spec Product Advantages

- ✓ High accuracy, it can pass Level I metrology
- ✓ Auto calibration for better user experience
- ✓ Connect to APP to find similar color
- ✓ UV included /UV excluded ,UV calibration
- ✓ Multi-function calibration base, combine calibration and charging functions
- ✓ SCI/SCE
- ✓ Integrated camera to see the measurement area for accurate test



Color Spec Series Products

| Model | Instrument | Light Source | Wavelength Range | | | Auto Calibration | Aperture Quantity | Camera | UV | SCI/ SCE | Display Accuracy | APP |
|--------|------------|-----------------|---------------------|---------|-----|---------------------|----------------------|--------|----|-------------|---------------------|-----|
| CS-500 | | LED | 400-700nm | dE≤0.05 | 0.3 | v | 1 | | | SCI | 0.1 | ٧ |
| CS-520 | E | LED | 400-700nm | dE≤0.03 | 0.2 | v | 3 | v | ٧ | ٧ | 0.01 | ٧ |



Parameters

| Model | CS-500 | CS-520 | | | | |
|-------------------------------|--|---|--|--|--|--|
| Geometry | D/8 (diffused illumination,8° viewing), Specular Component Included (SCI) | D/8 (diffused illumination,8° viewing), SCI (Specular Component Included) , SCE (Specular Component Excluded) | | | | |
| 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 | 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 | | | | |
| Light Source | LED(Full band balanced LED) | LED(Full band balanced LED) | | | | |
| Illumination Area/Aperture | MAV:Ф8mm/Ф11mm | MAV:Ф8mm/Ф11mm; MAV:Ф4mm/Ф6mm; MINI:1*3mm | | | | |
| Wavelength Interval | 10nm | 10nm | | | | |
| Wavelength Range | 400-700nm | 400-700nm | | | | |
| Repeatability | Chromaticity value: Max. :dE*ab< 0.1, Average :dE*ab< 0.05, standard deviation within ΔE*ab 0.03 (when a white tile is measured 30 times at 5-seconds interval) Reflectance: standard deviation < 0.1% | Chromaticity value:Max. :dE*ab< 0.04, Average :dE*ab< 0.03, standard deviation within ΔE*ab 0.02 (when a white tile is measured 30 times at 5-seconds interval) Reflectance: standard deviation < 0.1% | | | | |
| Test Time | About 2s | About 1s | | | | |
| Interface | USB , Bluetooth | USB , Bluetooth | | | | |
| 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 | A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U 30,U35,DLF,NBF,TL83,TL84 | | | | |
| Display Accuracy | 0.1 | 0.01 | | | | |
| | Conform to CIE No. 15 GB/T 3978 GB 2893 GB/T | Conform to CIE No. 15 GB/T 3978 GB 2893 GB/T 18833 ISO7724 | | | | |



| Model | CS-500 | CS-520 | | | | |
|-----------------------------------|--|--|--|--|--|--|
| Sphere Size | 40mm | 40mm | | | | |
| Reflectance Range | 0-200% | 0-200% | | | | |
| Reflectance Resolution | 0.01% | 0.01% | | | | |
| Observer Angles | 2°,10° | 2°,10° | | | | |
| Battery | Rechargeable, 8000 times continuous tests, 3.7V/3000mAh | Rechargeable, 8000 times continuous tests, 3.7V/3000mAh | | | | |
| Lamp Lifetime | 10 years, 1 million tests | 10 years, 1 million tests | | | | |
| Language | Chinese and English | Chinese and English | | | | |
| Software | Andriod,IOS,Windows | Andriod,IOS,Windows | | | | |
| Camera | without | with | | | | |
| Pass Metrology | Yes, metrology level I | Yes, metrology level I | | | | |
| Storage | APP mass storage | APP mass storage | | | | |
| Sensor | 256 pixel CMOS sensor | 256 pixel CMOS sensor | | | | |
| Inter- instrument agreement | ΔE^*ab < 0.3 (BCRA Series II, average measurement of 12 tiles , MAV/SCI) | ΔE^*ab < 0.2 (BCRA Series II, average measurement of 12 tiles , MAV/SCI) | | | | |
| Screen | IPS Full Color Screen,2.4 inches | IPS Full Color Screen,2.4 inches | | | | |
| Calibration | Auto | Auto | | | | |

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New Generation Spectrophotometer CS-500/520

by CHNSpec Tech

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