

Spectral Colorimeter 420 Series Introduction



Spectral colorimeter CS-420 series develops new color measurement method of colorimeter with build-in camera to see test area, UV light source for fluorescence color measurement, connected to mobile phone APP, unlimited storage memory, build-in color cards to find the similar color at anytime and anywhere. User can also use APP for color matching and color correction. CS-422 is with switchable aperture to measure samples with different sizes.

Part 1. Instrument Advantages

1. Different apertures

Two Apertures / Small Aperture / Big Aperture

2. Auto calibration

3. SCI/SCE

It supports both SCI and SCE test which is more consistent with result of visual method.

4. Many different kinds of test parameters

Opacity, whiteness index, yellowness index and other 30 kinds of test parameters

5. Provide 26 Kinds of Illuminants for Choice

6. Good repeatability for stable measurement (Delta E*ab 0.06)

7. Guarantee to pass the national metrology

8. Portable and Massive Color Card Database

Connect to mobile phone APP to create database to upload the color shades from printing, paint, textile color cards. No need to carry big and heavy color card, we can find color card database from Colormeter Pro APP and find the closed/similar color easier and faster.

9. Cloud database, more convenient to view and upload

Official color card databases are available. Personal users can update color information to cloud and share between different instruments which make color management much easier. Enterprise users can create and manage their own color library and formula information in the cloud and share the information to their customers and suppliers through the unique invitation code.

10. Better performance than traditional colorimeter

- 1). UV for fluorescence material test
- 2). Camera to see the test area to avoid test error
- 3). Paint color matching software: user can use mobile phone App to achieve color correction function.



Part 2. Technical Parameter

Model	CS-420	CS-421	CS-422
Color	Blue		
Geometry	D/8(diffused illumination,8 degree viewing) SCI (specular component included), SCE (specular component excluded)		

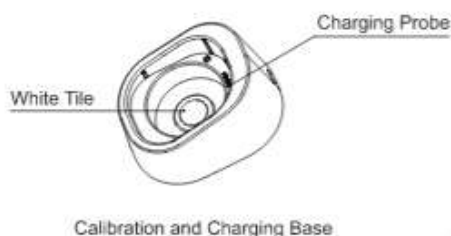
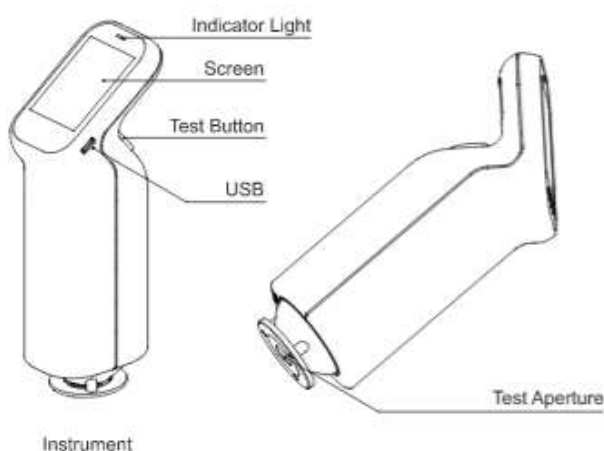
Repeatability	Chromaticity Value: Standard deviation $\Delta E^*ab \leq 0.03$ Average : $dE^*ab \leq 0.04$ Max.: $dE^*ab \leq 0.06$ (when a white tile is measured 30 times at 5 seconds interval)		
Inter-instrument Agreement	$\Delta E^*ab \leq 0.4$		
Display Accuracy	0.01		
Test Aperture	$\Phi 8mm$	$\Phi 4mm$	$\Phi 4mm+8mm$
Color Space and Indices	Reflectance, CIE-Lab, CIE-LCh, Hunter Lab, CIE-Luv, XYZ, Yxy, RGB, Color Difference (ΔE^*ab , ΔE^*cmc , ΔE^*94 , ΔE^*00), Whiteness Index (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, Hunter, Taube Berger Stensby), Yellowness Index (ASTM D1925, ASTM E313-00, ASTM E313-73), Blackness Index (My, dM), Staining Fastness, Color Fastness, Tint (ASTM E313-00), Color Density CMYK (A, T, E, M), Metamerism Index 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		
Color Matching Software	Support color matching on APP (if user buy the color matching software)		
Light Source	LED+UV		
Camera	Yes		
Calibration	Auto		
Software	Android, IOS, Windows		
Accuracy guarantee	Pass National Metrology Level I		
Observer	2°, 10°		
Sphere Size	40mm		
Standard	Conform to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO 7724-1, ASTM E1164, DIN 5033 Teil 7		
Spectroscopic Method	Integrated optics		
Sensor	CMOS Sensor		
Wavelength interval	10nm		

Wavelength	400-700nm
Reflectance	0-200%
Reflectance Resolution	0.01%
Measurement Time	About 1 second
Interface	USB, bluetooth
Screen	IPS full color screen ,2.4 inches
Battery	Rechargeable, 8,000 times continuous tests, 3.7V/3000mAh
Light Source Lifetime	10 years, 1 million tests
Language	Chinese and English
Storage	APP Mass Storage

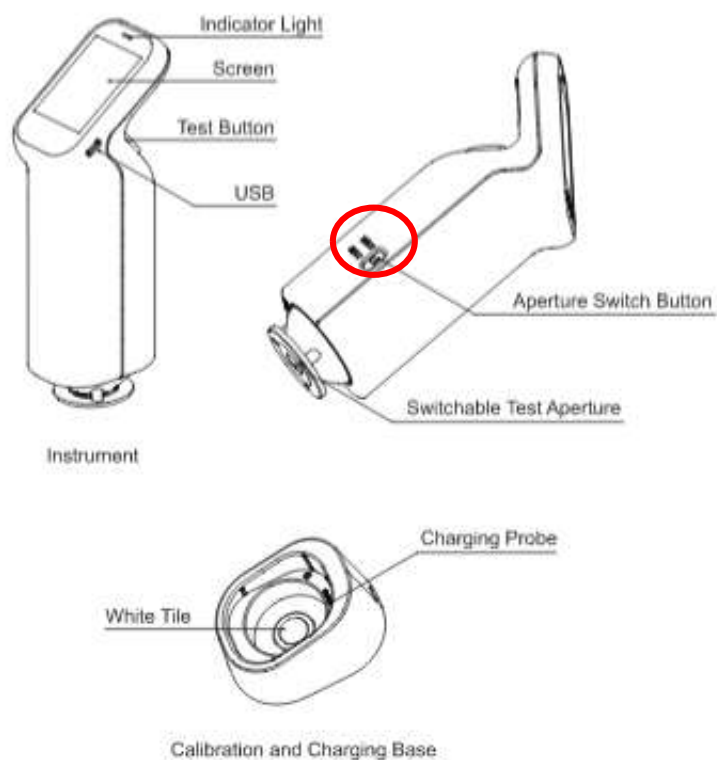
(note: CS-420/421/422 main difference is the aperture size and quantity)

Part 3. Instrument Outlook

CS-420/CS-421 Outlook



CS-422 Outlook



Part 4. Technical Support

1. One year warranty for whole instrument.