



Spectral Colorimeter

——Top-grade Accuracy



- ▶ Highest Precision Colorimeter
- ▶ Adopt spectral measurement theory for high accuracy
- ▶ Patented Technology for stability
- ▶ Optional accessories for different functions
- ▶ Obtain National Metrology Certification

CHN Spec

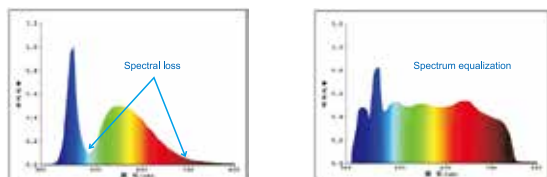
Hangzhou CHNSpec Technology Co.,Ltd

Tel : 86-0571-85888707 Web : www.hzcaipu.com/en

Add: 166 Wenyuan North Road, Jiangnan District, Hangzhou City, China

Innovative Technologies

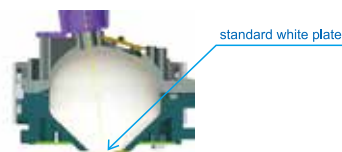
1. Uses CLEDs light source-spectrally balanced LED light source



In previous measurement instrument, we can only aim at the testing area approximately, and this may introduce errors. Our spectrophotometers includes a camera in our optical system, and the user can clearly see the tested area to avoid measurement errors.

2. ETC Real Time calibration technology

Currently, most instruments use standard white boards for calibration. When white board is damaged, the instrument's accuracy or precision will no longer be guaranteed.



In CHNSpec's spectrophotometers, it uses innovative ETC (Every Test Calibration); standard white board is included in the optical system, and therefore has reliable accuracy and repeatability in every measurement.

3. Automatic gloss compensation technology

Different gloss, or different instrument's lighting or observation conditions will largely affect the measurement of color. CHNSpec breaks international technical blockade, and puts forward the automatic gloss compensation technology first within the industry, and guarantees the accuracy of color measurement data for surfaces of different gloss. This research finding is published in international leading, SCI included journal, Optik.

The same color in different gloss will lead to different measured data.



4. Innovative light splitting SCS optical engine

CHNSpec uses innovative single-grating dual-light-paths light splitting system: SCS optical engine, creates the best measurement repeatability for portable spectrophotometers in the industry, and guaranteed accurate measurement of surface color of materials.



Technical Parameter

Type	CS-280	CS-280+	CS-286	CS-288
Illumination	d1/8(diffuse illumination: 8° viewing) SCI (conform to CIE No.15、ISO 7724/1、ASTME1164、DIN 5033 Teil7、JIS Z8722 Condition c standard)			
Integrating Sphere Size	Φ40mm, Avian-diffused reflection surface coating			
Illumination Light source	CLED			
Sensor	Array Sensor			
Wavelength	400-700nm			
Spectral Resolution	10nm			
Measurement Time	2s			
Measurement Aperture	11mm, optional 4mm, 6mm, 15mm			
Repeatability	Standard Deviation ΔE*ab 0.08 (When a white calibration plate is measured 30 x at 10-second intervals after white calibration)			
Observers	2° and 10°			
Light Source	A、C、D50、D65		A、C、D50、D55、D65、D75、F1、F2、F3、F4、F5、F6、F7、F8、F9、F10、F11、F12、DLF、TL83、TL84、NBF、U30、CWF、U35	
Display	Chromaticity value (L*a*b, L*C*h), delta E value, pass/fail, color tendency, average, generate test report, spectrum reflectance chart			
Color Differences	with Camera ΔE*ab, ΔE*CH		with camera, spectrum reflectance figure, manually input target sample ΔE*ab, ΔE*CH, ΔE*uv, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*94, ΔE*00	
Color Spaces	CIE-L*a*b, L*C*h	CIE-L*a*b, L*C*h, XYZ, Yxy		CIE-L*a*b*, L*C*h, L*u*v, XYZ, Yxy, Reflectance
Other Index	WI(ASTM E313-10, ASTM E313-73, CIE/ISO, AATCC, Hunter, Taube Berger, Ganz, Stensby) YI(ASTM D1925, ASTM E313-00, ASTM E313-73) Tint(CIE, ASTM E313, Ganz)		metameric index Milm, staining fastness, color fastness	
Memory	20000 pcs testing results			
Light Source Lifetime	5 years, 1.5 million			
Other	without	camera, electricity pantone color chart		camera, electricity pantone color chart, Mobile Phone APP
Display	Panchromatic true color screen			
Language	Chinese and English			
Interface	USB2.0		USB2.0, blue tooth	
Working Temperature	5-45°C, relative humidity 80% or less (at 35°C) with no condensation			
Storage Temperature	-25°C to 55°C, relative humidity 80% or less (at 35°C) with no condensation			
Power	Rechargeable Lithium Battery 8.4V/2000mAh, adaptor DC12V			
Size	77×86×210mm			
Weight	about 550g			
Standard Accessories	AC Adapter, Operating Manual, Color QC Software, Driving Software, USB Cable, Calibration Tiles (Black and White), Protection Cover, Canvas bag			
Optional	Micro Printer			
Color Matching System	not matching			
UV Light Source	excluded			