

Portable Spectrophotometer



CS-580/600/650/660

Product Advantages



SCS optical engine

Adopt innovative light splitting system SCS optical engine which creates the best measurement repeatability for portable spectrophotometers, and guarantees accurate measurement of materials surface color.



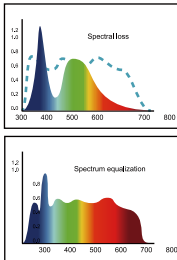
Camera to see the measurement area

In previous spectrophotometer, we can only aim at the testing area approximately, and it may introduce errors. Our new spectrophotometer includes a camera, so the user can clearly see the measurement area to avoid measurement errors.

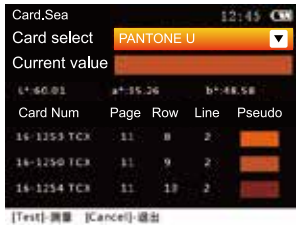


Adopt CLEDs light source – spectrally balanced LED light source

LED light source has balanced intensity across visible spectrum avoids the spectral deficiency in certain parts of the spectrum in common white LEDs, which guarantees the speed and accuracy of the measurement results. This research has been published in national leading optical journal Chinese Optics Letter.



Pantone Color Number Matching



To improve the utility and convenience of our instrument, we develop spectrophotometer with built-in pantone color swatches. After measurement, instrument can help us find three similar colors from the color swatches which can greatly improve working efficiency.

Technical Data

Model	CS-580	CS-600	CS-650	CS-660
Illumination/Viewing System	Observer : 2°/10° d/8(Diffused illumination, 8 degree viewing) , simultaneous measurement of SCI(specular component included)/SCE(specular component excluded) (conform to CIE No.15,ISO 7724/1,ASTM E1164,DIN 5033 Teil7, JIS Z8722 Condition C standards)			
Integrating Sphere	Φ40mm,Avian diffused reflection surface coating			
Light source	CLEDs		Pulse Xenon Lamp	CLEDs
Sensor	dual light path sensor array			
Wavelength Range	400-700nm		360-740nm	400-700nm
Wavelength Pitch	10nm			
Half Band Width	5nm			
Reflectance Range	0-200%			
Resolution	Reflectance 0.01%			
Illuminants	A,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12, CWF, U30,DLF, NBF,TL83,TL84,U35			
Display	Reflectance graph/value, chromaticity value, color difference values, pass/fail results, color tendency, color simulation, history data, color simulation, manually input target value, generate test report			
Measurement time	2s	0.5s	about 2s	0.5s
Measurement Interval	about 2s			
Color Spaces	CIE-L*a*b, L*C*h, L*u*v, XYZ, Yxy, Reflectance	CIE-L*a*b, L*C*h, L*u*v, XYZ, Yxy, Reflectance,Hunter-lab, Munsell MI,CMYK, RGB,HSB		
Color Difference	ΔE*ab, ΔE*CH, ΔE*uv, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*94,ΔE*00	ΔE*ab, ΔE*CH, ΔE*uv, ΔE*cmc(2:1), ΔE*cmc(1:1),ΔE*94,ΔE*00, ΔE*ab (Hunter),555 color shade		
Other Indices	WI(ASTM E313-10,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger, Stensby),YI(ASTM D1925,ASTM E313-00,ASTM E313-73),Tint(ASTM E313,CIE,Ganz);Metamerism Index Milm, Staining Fastness, Color Fastness,opacity, DS Wavelength,color strength ISO Brightness, 8°Gloss, A density, T density, M density, E density			
Repeatability	Chromaticity value: ΔE*ab 0.03 (when a white calibration plate is measured 30 x at 5-second intervals after white calibration, (max.0.05))		Chromaticity value: ΔE*ab 0.02 (when a white calibration plate is measured 30 x at 5-second intervals after white calibration, (max.0.04))	Chromaticity value: ΔE*ab 0.015 (when a white calibration plate is measured 30 x at 5-second intervals after white calibration, (max.0.03))
Inter-Instrument agreement	ΔE*ab within 0.2(BCRA Series II, average measurement of 12 tiles)			
Battery	rechargeable, 10000 continuous tests, 7.4V/6000mAh			
Interface	USB			
Data Storage	20000 test results			
Light Source Lifetime	5 years, 1.5 million tests			
Size	181*73*112mm(L*W*H)			
Weight	about 550g(without battery)			
Screen	2.8 inches color screen			
Working Temperature	0~45℃ , relative humidity 80% or below(at 35℃),no condensation			
Storage Temperature	-25℃ to 55℃ , relative humidity 80% or below(at 35℃),no condensation			
Standard Accessories	Power Adapter, Lithium Battery, Operate Manual, color QC software, driver software, color USB cable, black/white calibration tile, tile protective cover, carrying bag, electronic color charts, verification certification			
Optional Accessories	powder molding device, micro printer			
UV light source	without		with	without
Aperture Size	10mm/4mm/6mm (one instrument with one aperture)			