

CS-810

Product Advantages

Glass and Liquid Color Measurement

CS-810 transmittance spectrophotometer is specially designed for measuring the material transmittance, absorbance, concentration, chromaticity and other datas. It adopts D/8 structure, CLEDS, double optical path spectrum analysis technology and every test calibration technology. Instrument resolution reaches 0.0001, transmittance repeatability standard deviation is within 0.08% and chromaticity value ΔE^*ab 0.015.

Adopts CLEDs illuminant

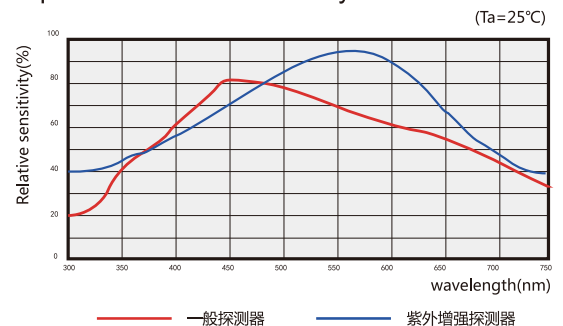
Full-band balanced light source which ensures adequate spectral distribution in the visible range, to avoid the spectral loss of white LED in a particular band, improve the measurement speed and results accuracy.

Every Test Calibration

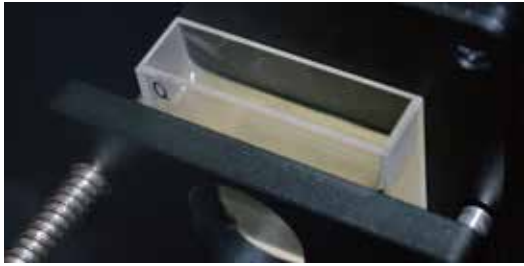
The standard white board is inside the optical system for has reliable accuracy and repeatability in each test.

Usage of UV-enhanced Silicon Photodiode

Transmittance measure range improved from 0-100% to 0-200%



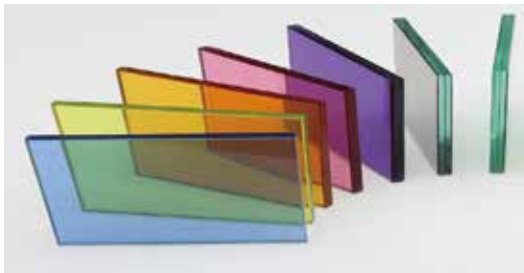
Application Examples



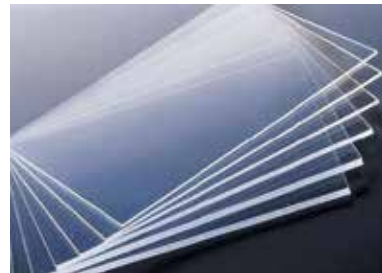
▲ Liquid



▲ Solvent



▲ Glass



▲ Transparent Plastic

Technical Data

Type	CS-810
Illumination /Viewing System	Viewing Degree:2°and 10° Illumination: d/0 (diffuse illumination, 0 degree viewing) (conform to CIE No.15, ISO 7724/1, ASTM E1164, DIN 5033 Teil7, JIS Z8722, Condition c standard)
Integrating Sphere	40mm, Avian-D Fully diffuse reflective surface coating
Illumination	CLEDs
Detector	Dual optical sensor array
Wavelength	400-700nm
Wavelength Pitch	10nm
Half Band Width	5nm
Reflectance Range/Resolution	0-200% 0,01%
Light Source	A,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,DLF,NBF,TL83,TL84
Display	Reflectance graph/value, chromatic value, color difference values, color assessment results, color tendency, display measurement area, history color value simulation, manual input standard sample, generate measurement reports
Measurement Interval	2s
Measurement Time	0,5s
Measurement Caliber	25,5*10mm (cuvette support)

Color Space	CIE-L*a*b,L*C*h,L*u*v,XYZ,Yxy,Transmittance,Hunterlab, Munsell,MI,CMYK
Color Difference Formula	$\Delta E^*ab, \Delta E^*CH, \Delta E^*uv, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*94, \Delta E^*00, Eab(Hunter), 555Color$ classification
Other Indicators	WI(ASTM E313-00,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,APHA,Pt-Co Index,Gardner
Repeatability	Transmittance, standard deviation within 0,08% 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	Within ΔE^*ab 0.2
Data Storage	Mass storage (PC)
Interface	USB
Light source lifetime	5years, 1.5 million tests
Size	475*340*150mm (L*W*H)
Working Temperature	0-45°C,relative humidity 80% or below (at 35°C); no condensation
Standard Accessories	AC power line, color QC software, driving software, USB cable, black calibration tile, 40x10 cuvette