



Spectral Colorimeter (SCD Series) Brochure

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Leader in Lighting & Electrical Test Instruments

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Spectral Colorimeter

Basic Introduction

Spectral colorimeter is the colorimeter which adopts the theory of spectrophotometer. It is widely used for plastic, printing, paint, ink, textile, dyeing and other industries for color management. It could measure the target L^*a^*b , L^*c^*h and the sample ΔE and ΔLab value.

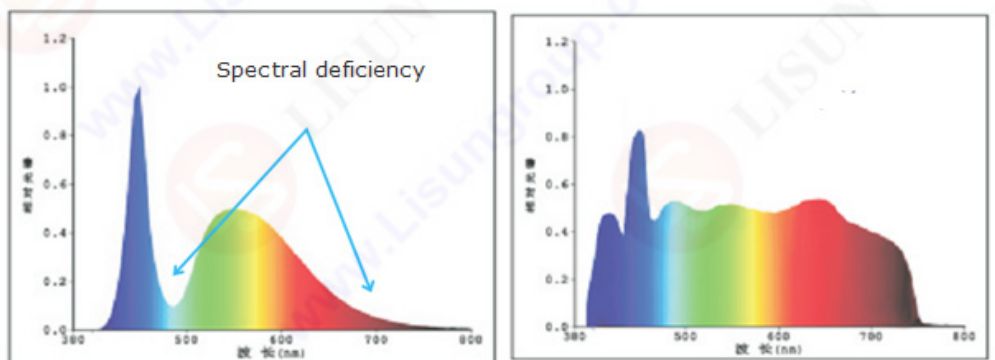
Product Model



SCD-380/SCD-385/SCD-386/SCD-388

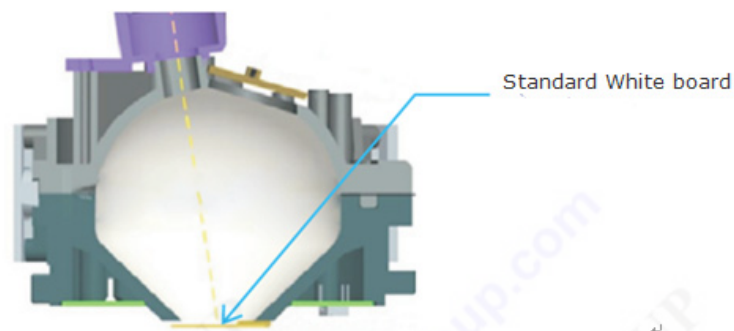
Technical Features

- **Uses CLEDs light source – spectrally balanced LED light source**
LED light source that 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.



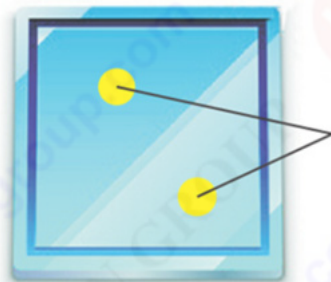
- **ETC-Every Test calibration technology**

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 this 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.



- **Automatic gloss compensation technology**

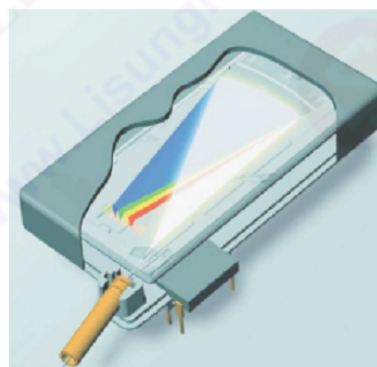
Different gloss or different instrument's light source or observation conditions will largely affect the color measurement. The automatic gloss compensation technology guarantees the accuracy of color measurement data for surfaces of different gloss. This research is published in international leading journal optic.



Different gloss will cause the different measurement

- **Innovative light splitting SCS optical engine**

Adopt 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.



Instrument Details



Technical Data

Type	SCD-380	SCD-385	SCD-386	SCD-388
Illumination	DI/8(Diffused Illumination, 8 degree viewing) (conform to CIE No.15、ISO 7724/1、ASTM E1164、DIN 5033 Teil7、 JIS Z8722 Condition c standard)			
Size of integrating sphere	Φ40mm, Avian diffused reflection surface coating			
Illumination Light source	CLED			
Sensor	array sensor			
Wavelength	400-700nm			
Spectrum 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 calibration)			
Observe Angles	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,			

Type	SCD-380	SCD-385	SCD-386	SCD-388
	pass/fail, color tendency, average, generate test report, spectrum reflectance figure /data			
		With camera to see the measurement area	With camera to see the measurement area, spectrum reflectance figure /data, manual input target data	
Color Difference Formula	$\Delta E^{*}ab$, $\Delta E^{*}CH$		$\Delta E^{*}ab$, $\Delta E^{*}CH$, $\Delta E^{*}uv$, $\Delta E^{*}cmc(2:1)$, $\Delta E^{*}cmc(1:1)$, $\Delta E^{*}94$, $\Delta E^{*}00$	
Color Space	CIE-L*a*b, L*C*h, reflectance	CIE-L*a*b, L*C*h, XYZ, Yxy, reflectance	CIE-L*a*b, L*C*h, L*u*v ,XYZ, Yxy, reflectance	
Other		WI(ASTM E313-10,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger, Ganz, Stensby) YI(ASTM D1925, ASTM E313-00,ASTM E313-73)		
			metameric index , staining fastness ,Color fastness	
Data Storage	20000samples			
Light Source Lifetime	5 years, 1.5 million times			
Other Function	without	camera view, input color swatches		camera view, input color swatches, mobile phone APP
Screen	Panchromatic True Color Screen			
Language	Chinese and English			
Interface	USB2.0			USB2.0 Bluetooth
Operating Temperature	5~45℃, relative humidity 80% or below(at 35℃),no condensation			
Storage temperature range	-25℃ to 55℃ , relative humidity 80% or below(at 35℃),no condensation			
Power	Rechargeable Lithium Battery 8.4V/2000mAh, adaptor DC12V			
Size	77×86×210mm			
Weight	About 550g			
Standard Accessories	adapter, operating manual, color management software, drive software, electronic manual, color management guide, USB cable, black/white calibration			

Type	SCD-380	SCD-385	SCD-386	SCD-388
	tube, protective cover, portable bag, electronic color charts			
Optional	Micro Printer			
Color Matching System	Not matched			
UV Light Source	without			

Application



Plastic



Paint



Print



Food



Textile



Car