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INFITEK

Laboratory and Medical equipment one-stop solution provider

Infitek

Infitek Inc.
Address: 522W Riverside Ave Ste N, Spokane, WA 99201, USA
Email: Info@infitek.com

Infitek Co., Ltd.
TEL: +86-531-88982330
FAX: +86-531-88983691
Website: infitek.com
Email: info@infitek.com
Service: service@infitek.com
Address: Room 201A, Building 9 (Block B), No. 2679,
Hechuan Road, Minhang District, Shanghai,P.C.201100

INFITEK CO., LTD.
PRODUCT BROCHURE

Colorimeter

SP-CLR410C SP-CLR411C SP-CLR412C

Features

With Auto calibration

Different apertures: Two Apertures / Small Aperture / Big Aperture

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

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

Provide 26 kinds of illuminants for choice

Good repeatability for stable measurement (Delta E*ab 0.08)



- Auto calibration
- Display Accuracy:0.01
- Different apertures: Two Apertures / Small Aperture / Big Aperture
- Test Aperture/Illuminated Area:Φ8mm/Φ11mm;Φ4mm/Φ6mm;Φ8mm/Φ11mm，Φ4mm/Φ6mm



Description

- It has auto calibration to make it simple in operation and contains 30 kinds of parameters and 26 kinds of illuminants. Two apertures version are with switchable apertures to measure samples with different sizes.

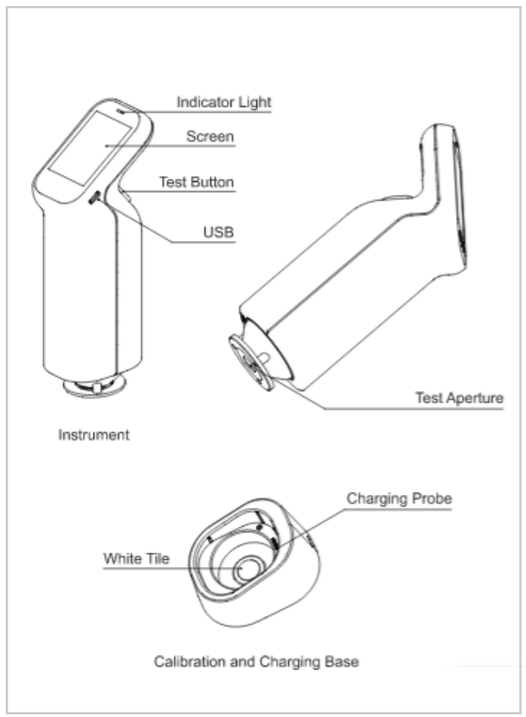
Specifications

Model	SP-CLR410C	SP-CLR411C	SP-CLR412C
Type	Economical	Economical	Economical
	（Big Aperture）	（Small Aperture）	(Two Apertures)
Color	Green		
Geometry	D/8 (Diffused illumination, 8°viewing)		
	SCI (specular component included),SCE (specular component excluded)		
Repeatability	Chromaticity Value:		
	Standard deviation ΔE*ab≤ 0.04		
	Average : dE*ab≤ 0.05		
	Max.: dE*ab≤ 0.08		
	(When a white tile is measured 30 times at 5 seconds interval)		
Inter-instrument Agreement	ΔE*ab≤0.4		
Display Accuracy	0.01		
Test Aperture/Illuminated Area	Φ8mm/Φ11mm	Φ4mm/Φ6mm	Φ8mm/Φ11mm，Φ4mm/Φ6mm
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		
Support Color Matching Software	No		
Light Source	LED		
Camera	No		
Calibration	Auto		
Software	Windows		
Accuracy Guarantee	Pass National Metrology Level I		
Observer	2°，10°		
Sphere Size	40mm		
Spectroscopic Method	Integrated optics		
Sensor	CMOS Sensor		
Wavelength interval	10nm		
Wavelength Range	400-700nm		
Reflectance Range	0-200%		
Reflectance Resolution	0.01%		
Reflectance Resolution	0.01%		
Measurement Time	About 1 second		
Display	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	English		
Storage	100 pieces of data		
Dimensions (L*W*H)	180*60*51mm		
Weight	280g		

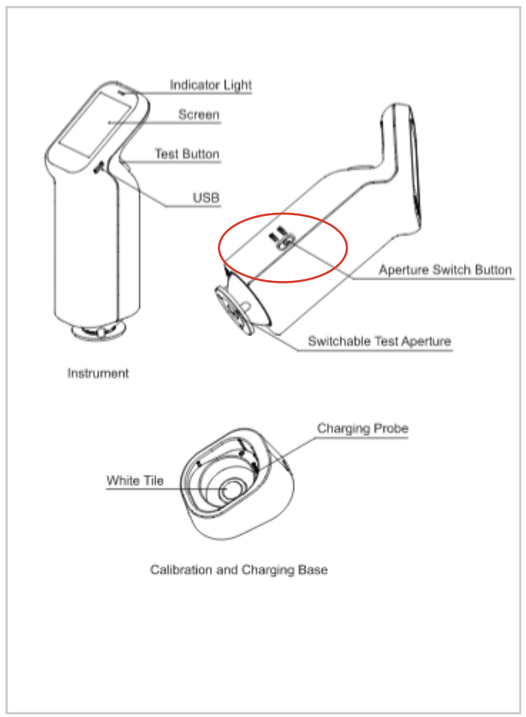
Note:
- Main difference of SP-CLR410C/SP-CLR411C/SP-CLR412C is the aperture size and quantity.
- Illuminated area is same as instrument aperture

Product structure

● Economical（Big Aperture/Small Aperture）



● Economical（Two Apertures ）



Colorimeter

CLR-T



Features

- Visual measurement of color matching to determine material color;
- Design in conformity with internationally accepted color scale of Lovibond;
- Simple structure and easy to operate.

Specification

Model	CLR-T
Measurement range	Red R0.1-R79.9 Lovibond
	Yellow R0.1-R79.9 Lovibond
	Blue R0.1-R49.9 Lovibond
	Neutral 0.1-3.9 Lovibond
Minimum Reading	0.1 Lovibond
White board diffuse reflectance	>80%
Magnification	1.9X
Dimension of Colorimetric dishes	10mm 20mm 40mm
	25.4mm 20mm 40mm
	133.4mm 20mm 40mm
Weight (Gross)	11 kg
Overall dimension	620mm×440mm×300mm

Colorimeter

SP-CLR420C SP-CLR421C SP-CLR422C



Auto calibration

Display Accuracy:0.01

Portable and massive color card database

Different apertures: Two Apertures / Small Aperture / Big Aperture

Test Aperture/Illuminated Area:Φ8mm/Φ11mm;Φ4mm/Φ6mm;Φ8mm/Φ11mm,Φ4mm/Φ6mm

Description

- It develops new color measurement method of colorimeter with build-in camera to see test area, UV light source for fluorescence color measurement; It can be connected to mobile APP and has unlimited storage memory;
  With built-in color card, you can find similar colors anytime, anywhere.

Features

- With Auto calibration
- Different apertures:
  Two Apertures / Small Aperture / Big Aperture
- Supports both SCI and SCE test which is more consistent with result of visual method.
- Many different kinds of test parameters:
  Opacity, whiteness index, yellowness index and other 30 kinds of test parameters
- Provide 26 kinds of illuminants for choice
- Good repeatability for stable measurement (Delta E*ab 0.06)
- Portable and massive color card database
  1)Connect to mobile phone APP to create database to upload the color shades from printing, paint, textile color cards.
  2)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.
- Cloud database, more convenient to view and upload
  1)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.
  2)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.
- 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.

Specifications

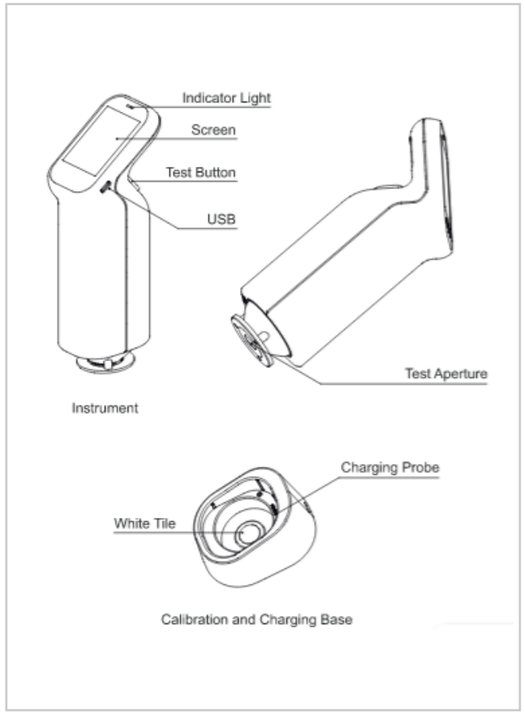
Model	SP-CLR420C	SP-CLR421C	SP-CLR422C
Type	Spectral (Big Aperture)	Spectral (Small Aperture)	Spectral (Two Apertures)
Color	Blue		
Geometry	D/8(diffused illumination,8 degree viewing)		
	SCI (specular component included),SCE (specular component excluded)		
Repeatability	Chromaticity Value:		
	Standard deviation ΔE*ab≤ 0.03		
	Average : dE*ab≤ 0.04		
	Max.: dE*ab≤ 0.06		
	(When a white tile is measured 30 times at 5 seconds interval)		
Inter-instrument Agreement	ΔE*ab≤0.4		
Display Accuracy	0.01		
Test Aperture/Illuminated Area	Φ8mm/Φ11mm	Φ4mm/Φ6mm	Φ8mm/Φ11mm，Φ4mm/Φ6mm
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,T		
	L83,TL84		
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		
Spectroscopic Method	Integrated optics		
Sensor	CMOS Sensor		
Wavelength interval	10nm		
Wavelength Range	400-700nm		
Reflectance Range	0-200%		
Reflectance Resolution	0.01%		
Reflectance Resolution	About 1 second		
Measurement Time	USB, bluetooth		
Display	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	English		
Storage	APP Mass Storage		
Dimensions (L*W*H)	180*60*51mm		
Weight	280g		

Note:

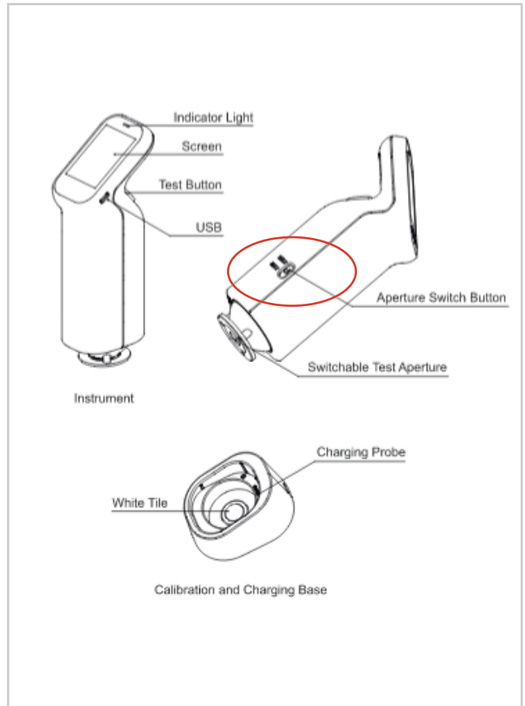
- Main difference of SP-CLR420C/SP-CLR421C/SP-CLR422C is the aperture size and quantity
- Illuminated area is same as instrument aperture)

Product structure

- Spectral（Big Aperture/Small Aperture）



- Spectral（Two Apertures ）



Colorimeter

SP-CLR10QC



Features

- High performance, but low price;
- Higher short-term repeatability accuracy: OE≤0.03;
- Light and cross dual positioning function;
- Equipped with rechargeable lithium ion battery, it has no need to repeatedly purchase batteries;
- Φ4mm measuring caliber, portable structure, suitable for more measuring occasions;
- White mainstream shape, color box fast packaging, convenient transportation;
- Built-in white board parameters, no need for black and white board correction.
- No need to connect the computer, and it can be used immediately after starting up,making the measurement simpler!



Description

- SP-CLR10QC economical practical color difference instrument humanized interface design allows you to easily learn to operate the light and cross dual positioning work.

Specification

Model	SP-CLR10QC
Size	205 x67x80mm
Lighting mode	87D
Weight	approx. 400g (battery included)
Standards compliant	CIE No.15, GB/T 3978
Battery	Rechargeable lithium ion battery 3.7V@3200 mAh
Inductor	silicon photodiode
Lighting source	life span of 5 years is more than 1.6 million measurements
Measuring caliber	Φ4mm
Display screen	TFT true color 2.8in @(16:9)
Color space	CIE lab
Interface	USB power supply only
Observer Angle	CIE 10° standard observer
Storage data	100 standard samples, 10000 samples
Observation source	D65
Operating temperature range	0-40*C(32-104 "F)
Display	chromaticity value, chromaticity value/graph, pass/fail
	results, color bias
Storage Temperature Range	-20~50°C(-4~122 F)
Measurement time	1.5 seconds
PC software	no software
Repeatability	OE* AB0.03 (average of 30 times)
Standard accessories	power adapter, manual, wristband, 4 platform measuring
	caliber
Difference between stations	AE* AB0.4 (average value of BCRA series 12 color plates)
Optional accessories	micro printer, powder test box

Colorimeter

SP-CLR60CP



Application Industry

SP-CLR60CP spectrophotometer is widely used in plastic, electronic, paint, ink, textile, garment, printing and dyeing, food, medical, cosmetic, industries, scientific research institutes, schools and laboratories. It can precisely measure kinds of color indexes in various color spaces and easy to use with powerful functions. The instrument is equipped with high-end color management software which can be connected to PC to achieve more extension functions.

Features

- Switchable 8mm and 4mm measuring apertures, easy to measure concave surface;
- Higher measurement stability and accuracy, Delta E ab<0.03;
- More color spaces, various color indexes, and extensive applicability;
- Double locating: illuminating locating and cross locating;
- Configured with high-capacity rechargeable Li-ion battery;
- Built-in white plate parameters and physical white calibration board, easy to operate;
- New integrating sphere optical path design, ensuring more stable measurement;
- Measurement data can pass national metrology authentication.

Specification

Model	SP-CLR60CP
Illuminating/Viewing Geometry	8°/ d
Light Source	LED Light
Sensor	silicon photodiode array
Measuring aperture	Φ8mmflat aperture; Φ4mmtip aperture
Color Space	CI E L AB，XYZ，LCh，CI E RGB，CI E LUV
Color Difference Formula	ΔE* ab, ΔE(h) , ΔE* uv,ΔE* 94, ΔE*cmc (2: 1) , ΔE*cmc (1: 1) , ΔE* 00
Other Chromaticity Data	WI (E313，CI E, AATCC，Hunt er)，YI (D1925，313)，Color Fastness，Staining Fastness, J PC79，BFD(1. 5: 1)，FMCI I
Observer	CI E 10°
Illuminant	D65，A，C，D50，F2，F6，F7，F8，F10，F11，F12
Display Data	Colorimetric Value, Color Difference Value/Graph, PASS/-FAIL Result, Color Offset
Measuring Time	0. 4s
Repeatability	ΔE* ab 0. 03 (Average of 30 measurements of standard white plate within 5s)
Errors between each instrument	within Delta E*ab 0.2
Dimension	205*67*80mm
Weight	500g
Battery	rechargeable lithium-ion battery 3. 7V @ 3200mAh
Lamp Life	5 years, more than 1.6 million measurements
Screen	TFT 2.8 inch（16
Interface	USB/ RS- 232
Storage	100 Standards, 20000 Samples
Operating Temperature	0~40℃（32~104°F）
Storage temperature	-20~50℃（-4~122°F）
PC software	CQCS3 software
Optional accessory	miniature thermal printer, powder test box

Colorimeter

SP-CLR110



Features

- Built-in white plate parameters. No need to calibrate each time which realizes rapid measurement.
- Double Locating: Illuminating locating and precise cross locating.
- Switchable Double Measurement End Face: Large stable end face and small concave-convex end face.
- New Integrating Sphere Optical Path Design: Eliminating the stray light of main optical path and auxiliary optical path. Possessing the highest measurement stability and precision.
- 4mm Measuring Aperture.
- Equipped with rechargeable high-capacity Li-ion battery. No need to purchase battery repeatedly.
- Configures CQCS3 software. Connects PC computer to realize more functions.
- Having got SCM Metrological Certification, CE Certification, and ISO9001 Quality Management System Certification.
- Hand-head structure: small and convenient; makes the measurement easier.
- Exquisite appearance: adopts traditional and fashionable aesthetic designs.
- Spending huge sums on high-end mold. Product consistency approaches 100%.
- High cost performance: large output, good quality, cheap products.



Specification

Model	SP-CLR110
Illuminating/Viewing Geometry	8/d
Measuring Aperture	Φ4mm
Detector	Silicon photoelectric diode
Locating	Illuminating Locating/Cross Locating
Measurement End Face	Large stable end-face and small concave-convex
	end-face
Color Space	CIEL*a*b*C*h* CIEL*a*b*
	CIEXYZ
Color Difference Formula	△E*ab △L*a*b* △E*C*h*
Light Source	D65
Light Source Device	LED blue light excitation
Errors Between Each Equipment	≤0.80ΔE*ab
Storage	100pcs standards 20000pcs samples
Repeatability	Standard deviation within ΔE*ab 0.08
	Average of 30 measurements of standard white plate
Language	English/Chinese
Weight	450g
Dimension	205×67×80 mm
Power source	Rechargeable lithium-ion battery 3.7V@3200mAh
Lamp Life	5 years, more than 1.6 million measurements
Charging Time	8 hours--100% electricity
PC Software	CQCS3 Software
Printer (optional)	Miniature thermal printer

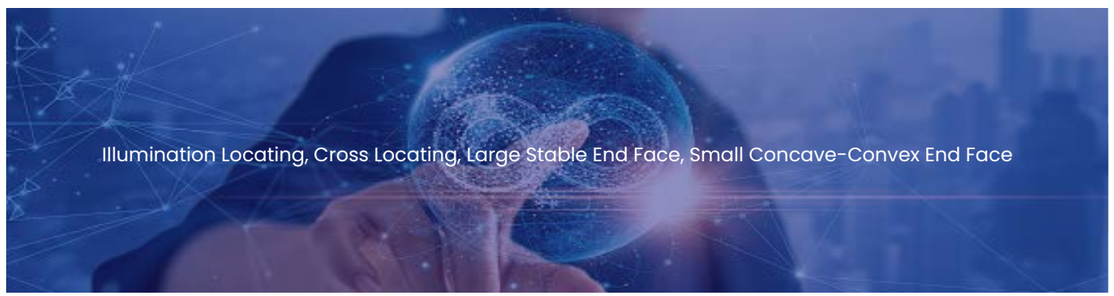
Colorimeter

SP-CLR145



Features

- Built-in white plate parameters. No need to calibrate each time which can perform measurement quickly.
- Double Locating: Illuminating locating and precise cross locating.
- Switchable Double Measurement End Face: Large stable end face and small concave-convex end face.
- New 45°/0° Optical Path Design: Significantly improves the measurement stability and precision.
- 8mm Measuring Aperture.
- Equipped with rechargeable high-capacity Li-ion battery. No need to purchase battery repeatedly.
- Configure CQCS3 software. Connects PC computer to realize more functions.
- Having got SCM Metrological Certification, CE Certification, and ISO9001 Quality Management System Certification.
- Hand-head structure: small and convenient; makes the measurement easier.
- Exquisite appearance: adopts traditional and fashionable aesthetic designs.



Specification

Model	SP-CLR145
Illuminating/Viewing Geometry	45°/0°
Measuring Aperture	Φ8mm
Measurement End-face	Large stable end face and small concave-convex end face
Detector	Silicon photoelectric diode
Locating	Illuminating Locating/Cross Locating
Color Space	CIEL*a*b*C*h* CIEL*a*b*
	CIEXYZ
Color Difference Formula	△E*ab △L*a*b* △E*C*h*
Light Source	D65
Light Source Device	LED blue light excitation
Errors Between Each Equipment	≤0.80ΔE*ab
Storage	100pcs standards 20000pcs samples
Repeatability	Standard deviation within ΔE*ab 0.08
	Average of 30 measurements of standard white plate
Weight	500g
Dimension	205×67×80 mm
Power source	Rechargeable lithium-ion battery 3.7V@3200mAh
Lamp Life	5 years, more than 1.6 million measurements
Charging Time	The first charging time is 8 hours--100% electricity
PC Software	CQCS3 Software
Printer (optional)	Miniature thermal printer

Colorimeter

SP-CLR200



Features

- **Leading Humanity Design and Convenient Operation**

  One-touch access to measurement interface

  Structure design in line with ergonomics

  East-to-use operating interface

- **Stable Measurement Performance**

  The repeatability △E is 0.08.

  Portable structure design which is more conductive to keeping the instrument stable when using.

- **Convenient and Fast Locating**

  Illumination locating is a fast, simple and convenient locating which is created by us.

- **PC Software—Realizes More Function Expansion**

  Be able to perform color difference analysis, color difference cumulative analysis, chromaticity index, color sample database management, simulating object color, etc.

- **Advanced Power Management Design**

  3nh is the first enterprise using high capacity Li-ion battery in colorimeter.

  3nh Li-ion battery can be repeatedly charged which will save cost. Meanwhile, it can measure more than 3000 times on one charge to ensure the stability of long time measurement.

Specification

Model	SP-CLR200
Illuminating/Viewing Geometry	8/d
Measuring Aperture	Φ8mm
Detector	Silicon photoelectric diode
Color Space	CIEL*a*b*C*h* CIEL*a*b*， CIEXYZ
Color Difference Formula	△E*ab △L*a*b △E*C*h
Light Source	D65
Light Source Device	LED blue light excitation
Errors Between Each Equipment	≤0.50ΔE*ab
Storage	100pcs standards 20000pcs samples
Repeatability	Standard deviation within ΔE*ab 0.08
	Average of 30 measurements of standard white plate
Weight	500g
Dimension	205×70×100 mm
Power source	Rechargeable lithium-ion battery 3.7V@3200mAh
Lamp Life	3 years, more than 1 million measurements
Charging Time	2 hours (First time 8 hours--100% electricity)
Measurement Times Before Recharging	More than 3000 times
Operating Temperature/Humidity Range	-10~40 ℃, relative humidity 0~85% with no condensation
Data Interface	USB
Optional Accessory	Miniature thermal printer, Powder Test Box
Package Dimension (W*D*H)(mm)	360*170*310mm
G.W.(kg)	2.3kg

Colorimeter

SP-CLR300 SP-CLR310



Features

- **Leading Humanity Design and Convenient Operation**

  Auto White and Black Calibration at Startup

  Structure Design in line with Ergonomics

  Easy-to-use Operation Interface

- **Stable Measurement Performance**

  The average fluctuation of △E is less than 0.06, actually more in 0.03~0.06.

  Portable structure design which is more conductive to keeping the instrument stable when using.

- **Flexible and Accurate Locating**

  Camera locating can solve the problem of locating a small area. The minimum width of locating is 4mm.

  Illumination locating is a fast, simple and convenient locating function which is the original function.

- **More Measurement Modes**

  Three measuring apertures for more circumstances.

  Five color spaces for more color schemes selection.

  Three light sources for more circumstances.

- **PC Software—Realizes More Function Expansion**

  The corresponding software serial number and password protection are configured.

  Be able to perform color difference analysis, color difference cumulative analysis, chromaticity index, color sample database management, simulating object color, etc..

- **National Patent and Innovative Technology**

  No.1 Camera locating and illumination location (NH310 has new functions of double locating.)

  No. 2 Built-in white plate; Automatic calibration at startup (for SP-CLR310)

  No. 3 Extended aperture (optional), available for measuring concave surface



Specification

NH Series Colorimeter Specifications		
	SP-CLR300	SP-CLR310
Illuminating/Viewing Geometry	8/d	8/d
Measuring Aperture	Φ8mm	Φ8mm/Φ4mm
Detector	Silicon photoelectric diode	Silicon photoelectric diode
Color Space	CIEL*a*b*C*h* CIEL*a*b*	CIEL*a*b*C*h* CIEL*a*b* CIEXYZ CIERGB CIEL*u*v* CIEL*C*h Yellowness & Whiteness Color Fastness
Color Difference Formula	△E*ab △L*a*b △E*C*h	△E*ab △L*a*b* △E*C*h* △ECIE94 △Ehunter
Light Source	D65	D65 D50 A
Light Source Device	LED blue light excitation	LED blue light excitation
Errors Between Each Equipment	≤0.40ΔE*ab	≤0.40ΔE*ab
Storage	100pcs standards 20000pcs samples	100pcs standards 20000pcs samples
Repeatability	Standard deviation within ΔE*ab 0.07 Average of 30 measurements of standard white plate	Standard deviation within ΔE*ab 0.06 Average of 30 measurements of standard white plate
Weight	500g	500g
Dimension	205×70×100 mm	205×70×100 mm
Power source	Rechargeable lithium-ion battery 3.7V@3200mAh	Rechargeable lithium-ion battery 3.7V@3200mAh
Lamp Life	5 years, more than 1.6 million measurements	5 years, more than 1.6 million measurements
Charging Time	2 hours (first time 8 hours--100% electricity)	2 hours (first time 8 hours--100% electricity)
Measuring Times Before Recharging	more than 3000 times	more than 3000 times
Operating Temperature/Humidity Range	-10~40℃, relative humidity 0~85% with no condensation	-10~40℃, relative humidity 0~85% with no condensation
Data Interface	USB	USB
Extended Aperture (optional)	-	Φ8mm extended aperture, available for measuring concave surface
Printer (optional)	Miniature thermal printer	Miniature thermal printer

Colorimeter

SP-CLR701



Application

- With 8mm aperture, SP-CLR701 spectroclorimeter is widely suitable for the industry production and quality inspection of accurate color difference control like plastic electronics, paint and ink, textile printing and dyeing, printing, ceramic industry, etc.

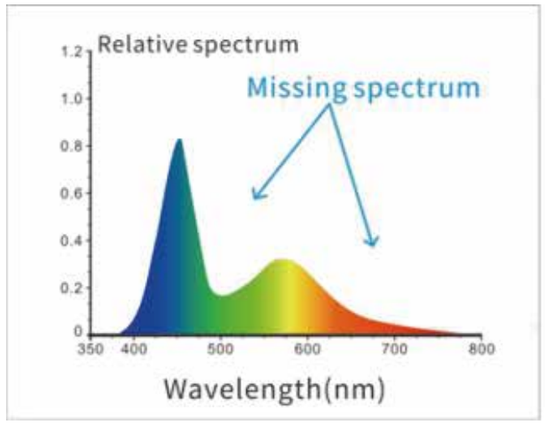
Technical Advantages

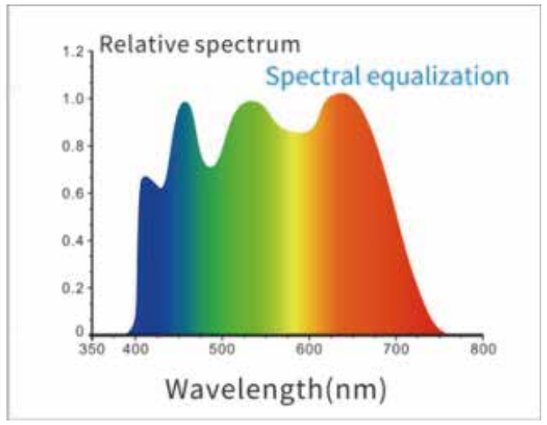
- Ergonomic design and simple-to-operate measuring device

  SP-CLR701 spectrocolorimeter has a beautiful, smooth shape and comfortable grip, which is in line with the structure design of human mechanics, and also fits the palm for continuous testing, so that you can use it quickly and easily. An automatic measuring device is added, which is portable, quick and easy to measure.

- Adopts full waveband balanced LED light source

  The full waveband balanced LED light source ensures sufficient spectral distribution in the visible light range, so as to avoid the spectral loss of white LED in specific waveband, and ensure the measurement speed and accuracy of the measurement results.





- Silicon photodiode array sensor (24 groups with double rows)

  The dual-24 array sensor with larger area has strong light but not saturate, higher sensitivity of low light and wider spectral response range, which ensures the measurement speed, accuracy, stability and consistency of the instrument.

- Calibration Certificate

  Each SP-CLR701 spectrocolorimeter has been verified and tested. After leaving the factory, each instrument is verified according to the measurement standards of authoritative verification departments, and the measurement data are traceable to the National Metrotechnical Institute to ensure the authority of the instrument test data.



- ETC real-time calibration technology

  SP-CLR701 spectrophotometer adopts imported standard white board, which is resistant to yelloping and dirt infiltration and can be wiped, ensuring the long-term accuracy of the instrument. An innovative ETC real-time Calibration technique is also used, with a built-in standard white board in the optical system, which is reliably accurate and repeatable for each Test.

Specification

Model	SP-CLR701
Optical Geometry	D/8(diffused illumination, 8-degree viewing angle) SCI Mode Comply to CIE No.15，GB/T 3978,GB 2893,GB/T 18833,I-SO7724-1,ASTM E1164,DIN5033 Teil7
Characteristic	Φ8mm apertures, which is used for accurate color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries
Integrating Sphere Size	Φ40mm
Light Source	Combined full spectrum LED light source
Spectrophotometric Mode	Flat Grating
Sensor	Silicon photodiode array (double row 24 groups)
Wavelength Range	400～700nm
Wavelength Interval	/
Semiband Width	10nm
Measured Reflectance Range	L:0~100; reflectivity:The reflectivity can be measured at 1 specific wavelength specified by the user (default: 550nm)
Measured Aperture	Φ8mm
Specular Component	SCI
Color Space	CIE LAB,XYZ,Yxy,LCh
Color Difference Formula	ΔE*ab,ΔE*00
Other Colorimetric Index	/
Observer Angle	10°
Illuminant	D65,A,F2(CWF)
Displayed Data	Reflectivity (the user specifies the reflectivity at 1 specific wavelength), Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Simulation, Color Offset

Specification

Model	SP-CLR701
Displayed Accuracy	0.1
Measurement Time	About 1.5s
Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.1 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.4 (Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Stabilizer cross position
Dimension	L*W*H=81X71X214mm
Weight	About 460g
Battery	Li-ion battery, 6000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	3.5-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB
Data Storage	Standard 500 Pcs, Sample 10000 Pcs
Language	Simplified Chinese, English, Traditional Chinese
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, USB Cable, User Guide, White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture
Optional Accessory	USB Micro Printer, Powder Test Box
Notes	Technical parameters are only for reference, subject to the actual sale of the product

Colorimeter

SP-CLR702



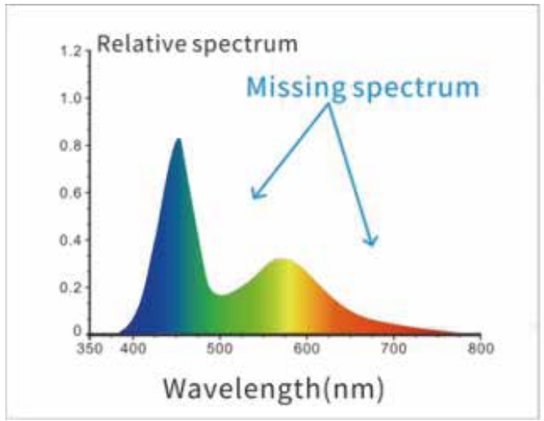
Application

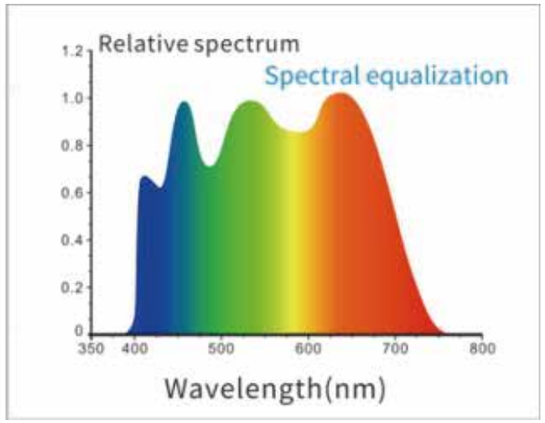
- With 8mm aperture, SP-CLR702spectroclorimeter is widely suitable for the industry production and quality inspection of accurate color difference control like plastic electronics, paint and ink, textile printing and dyeing, printing, ceramic industry, etc.

Technical Advantages

- **Adopt full waveband balanced LED light source**

  The full waveband balanced LED light source ensures sufficient spectral distribution in the visible light range, so as to avoid the spectral loss of white LED in specific waveband, and ensure the measurement speed and accuracy of the measurement results.





- **Silicon photodiode array sensor (24groups with double rows)**

  The dual-24 array sensor with larger area has strong light but not saturate, higher sensitivity of low light and wider spectral response range, which ensures the measurement speed, accuracy, stability and consistency of the instrument.

- **Ergonomic design and easy measuring device**

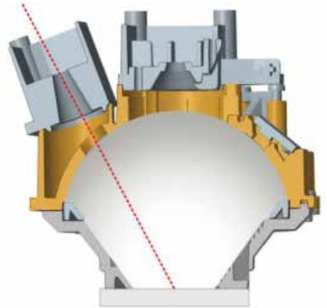
  SP-CLR702 spectrocolorimeter has a beautiful, smooth shape and comfortable grip, which is in line with the structure design of human mechanics, and fits the palm for continuous testing, so that you can use it quickly and easily. An automatic measuring device is added, which is portable, quick and easy to measure.

- **Calirbation Certificate**

  Each SP-CLR702spectrocolorimeter has been verified and tested. After leaving the factory, each instrument is verified according to the measurement standards of authoritative verification departments, and the measurement data are traceable to the National Metrotechnical Institute to ensure the authority of the instrument test data.

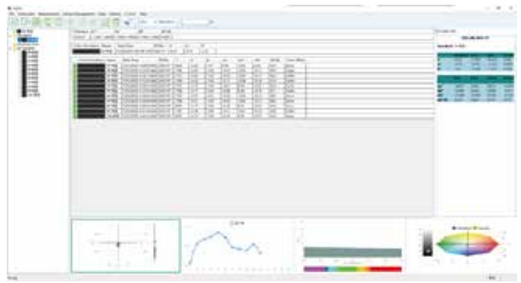
- **ETC real-time calibration technology**

  SP-CLR702 spectrophotometer adopts imported standard white board, which is resistant to yelloping and dirt infiltration and can be wiped, ensuring the long-term accuracy of the instrument. An innovative ETC real-time Calibration technique is also used, with a built-in standard white board in the optical system, which is reliably accurate and repeatable for each Test.



● Color management software

SQCX quality management software with SP-CLR702 spectrocolorimeter is suitable for quality monitoring and color data management in various industries. It will analyze the user's color management data, compare color differences, generate test reports, provide multiple color space measurement data, and customize the customer's color management.



Specification

Model	SP-CLR702
Optical Geometry	D/8(diffused illumination, 8-degree viewing angle)
	SCI Mode
Characteristic	With Φ8mm apertures,it is used for accurate color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries
Integrating Sphere Size	Φ40mm
Light Source	Combined full spectrum LED light source
Spectrophotometric Mode	Flat Grating
Sensor	Silicon photodiode array (double row 24 groups)
Wavelength Range	400～700nm
Wavelength Interval	/
Semiband Width	10nm
Measured Reflectance Range	L:0~100; reflectivity:The reflectivity can be measured at 3 specific wavelengths specified by the user (default: 440nm, 550nm, 600nm)
Measured Aperture	Φ8mm
Specular Component	SCI
Color Space	CIE LAB,XYZ,Yxy,LCh
Color Difference Formula	ΔE*ab,ΔE*00
Other Colorimetric Index	/
Observer Angle	10°
Illuminant	D65,A,F2(CWF)
Displayed Data	Reflectivity (the user specifies the reflectivity at 3 specific wavelengths), Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Simulation, Color Offset

Specification

Model	SP-CLR702
Displayed Accuracy	Display 0.1, storage 0.01
Measuring Time	About 1.5s
Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.08 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.4 (Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Stabilizer cross position
Dimension	L*W*H=81X71X214mm
Weight	About 460g
Battery	Li-ion battery, 6000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	3.5-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB
Data Storage	Standard 500 Pcs, Sample 10000 Pcs
Language	Simplified Chinese, English, Traditional Chinese
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, USB Cable, User Guide, PC Software(Download from office website), White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture
Optional Accessory	USB Micro Printer, Powder Test Box
Notes	Technical parameters are only for reference, subject to the actual sale of the product

Colorimeter

SP-CLR703





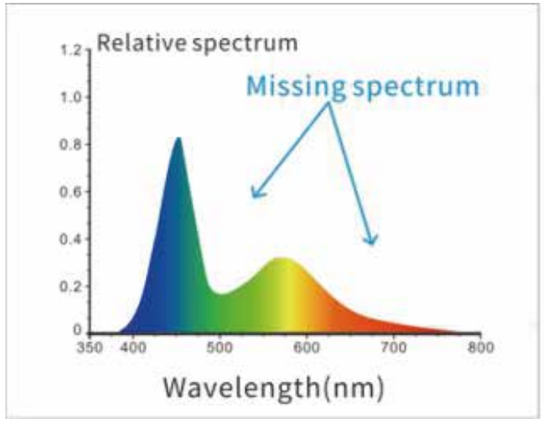
Application

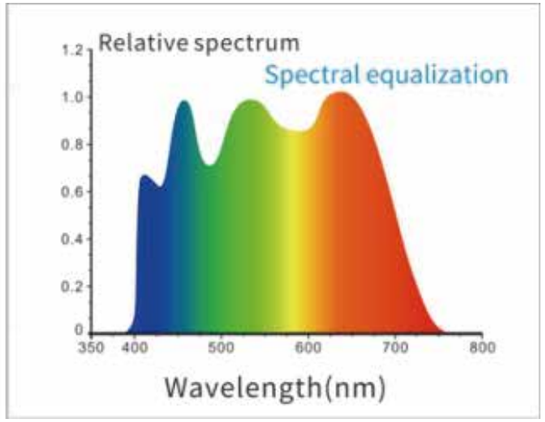
- With 8mm flat and tip apertures, SP-CLR703 spectroclorimeter is widely suitable for the industry production and quality inspection of accurate color difference control like plastic electronics, paint and ink, textile printing and dyeing, printing, ceramic industry etc.

Technical Advantages

- Adopts full waveband balanced LED light source

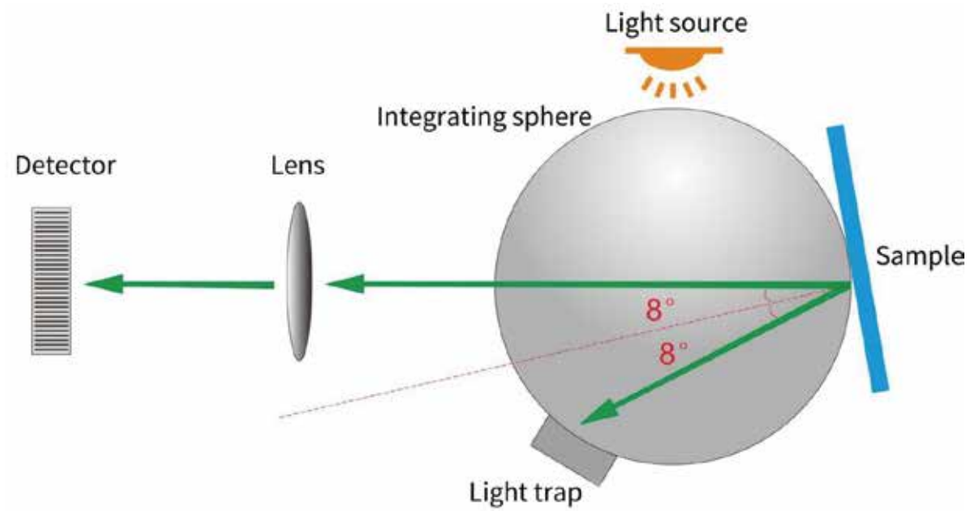
  The full waveband balanced LED light source ensures sufficient spectral distribution in the visible light range, so as to avoid the spectral loss of white LED in specific waveband, and ensure the measurement speed and accuracy of the measurement results.





- International common use d/8 SCI/SCE Synthesis technology is adopted

  SP-CLR703 spectrocolorimeter adopts D/8(diffused illumination, 8-degree viewing angle) which is widely applicable in the world, and SCI/SCE (specular component included/specular component excluded) Synthesis technology. It is suitable for color management and quality control in various industries such as color matching and coating, textile, plastic, food, building materials, cosmetics, etc.



Technical Advantages

- Ergonomic design and easy measuring device

  SP-CLR703 spectrocolorimeter has a beautiful, smooth shape and comfortable grip, which is in line with the structure design of human mechanics, and fits the palm for continuous testing, so that you can use it quickly and easily. An automatic measuring device is added, which is portable, quick and easy to measure.

- Silicon photodiode array sensor (32 groups with double rows)

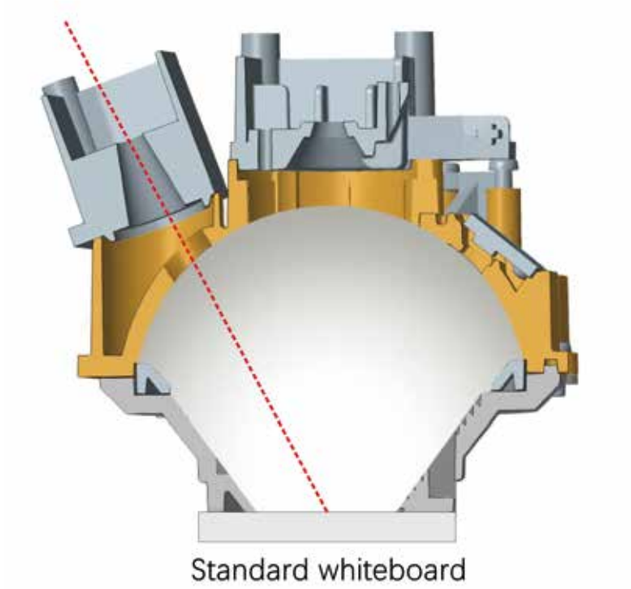
  The dual-32 array sensor with larger area has strong light but not saturate, higher sensitivity of low light and wider spectral response range, which ensures the measurement speed, accuracy, stability and consistency of the instrument.

- Calibration Certificate

  Each SP-CLR703 spectrocolorimeter has been verified and tested. After leaving the factory, each instrument is verified according to the measurement standards of authoritative verification departments, and the measurement data are traceable to the National Metrotechnical Institute to ensure the authority of the instrument test data.

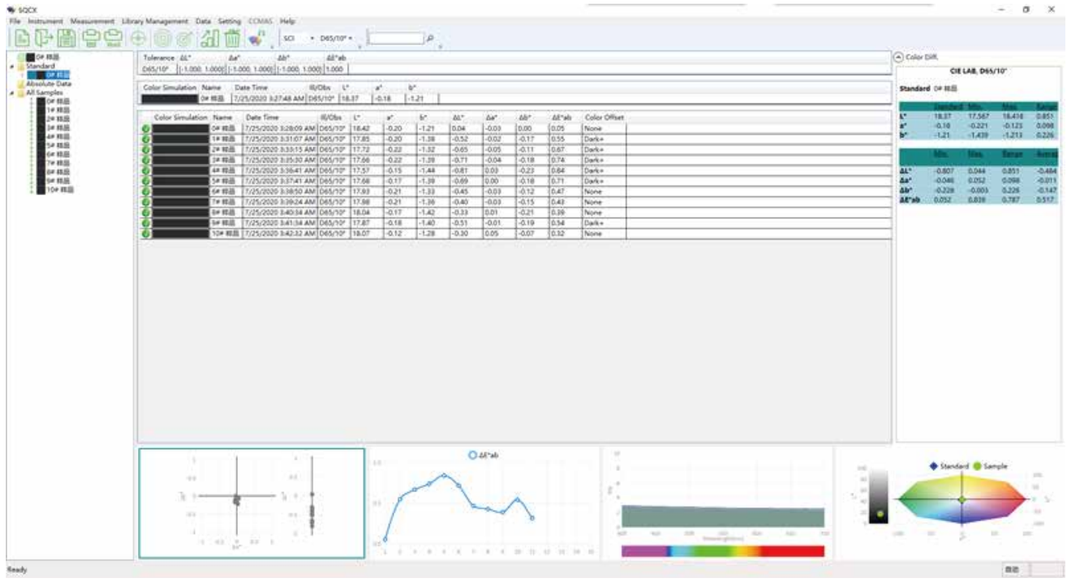
- ETC real-time calibration technology

  SP-CLR703 spectrophotometer adopts imported standard white board, which is resistant to yelloping and dirt infiltration and can be wiped, ensuring the long-term accuracy of the instrument. An innovative ETC real-time Calibration technique is also used, with a built-in standard white board into the optical system, which is reliably accurate and repeatable for each Test.



- Camera locating can clearly observe the measured area
  SP-CLR703 spectrocolorimeter has a built-in camera for positioning, which can accurately determine whether the measured part of the object is the center of the target through real-time viewing by the camera, thus improving the measurement efficiency and accuracy.

- Color management software
  SQCX quality management software with SP-CLR703 spectrocolorimeter is suitable for quality monitoring and color data management in various industries. Data the user's color management, compare color differences, generate test reports, provide multiple color space measurement data, and customize the customer's color management.



Specification

Model	SP-CLR703
Optical Geometry	D/8(diffused illumination, 8-degree viewing angle) SCI/SCE Mode Comply to CIE No.15，GB/T 3978,GB 2893,GB/T 18833,I-SO7724-1,ASTM E1164,DIN5033 Teil7
Characteristic	single apertures, more adaptability; Used for accurate color measurement and quality control in plastic elec-tronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries
Integrating Sphere Size	Φ40mm
Light Source	Combined full spectrum LED light source, UV light source
Spectrophotometric Mode	Flat Grating
Sensor	Silicon photodiode array (double row 32 groups)
Wavelength Range	400～700nm
Wavelength Interval	10nm
Semiband Width	10nm
Measured Reflectance Range	L:0~120; reflectivity:0~200%
Measured Aperture	Single Apertures：Φ8mm/Φ10mm
Specular Component	SCI/SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,s-RGB,βxy,Munsell(C/2)
Color Difference Formula	ΔE*ab,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00, DINΔE99
Other Colorimetric Index	WI(ASTM E313,CIE/ISO,AATCC,Hunter)， YI(ASTM D1925,ASTM 313), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opaci-ty,Color Card Search
Observer Angle	2°/10°
Illuminant	D65,A,C,D50,F2(CWF),F7(DLF),F10(T-PL5),F11(TL84),F12(TL83/U30)
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Simula-tion, Color Offset

Specification

Model	SP-CLR703
Displayed Accuracy	0.01
Measurement Time	About 1.5s (Measure SCI & SCE about 3.2s)
Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.06 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.3 (Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Camera Locating,stabilizer cross position
Dimension	L*W*H=81X71X214mm
Weight	About 460g
Battery	Li-ion battery, 6000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	3.5-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB
Data Storage	Standard 1000 Pcs, Sample 20000 Pcs(One data is able to include SCI/SCE)
Language	Simplified Chinese, English, Traditional Chinese
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, USB Cable, User Guide, PC Software(Down-load from office website), White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture, 8mm tip aperture
Optional Accessory	USB Micro Printer, Powder Test Box
Notes	Technical parameters are only for reference, subject to the actual sale of the product

Colorimeter

SP-CLR760



Features

- D / 8 geometric optical structure, conforming to CIE No.15, GB / T 3978, GB 2893, GB / T 18833, iso7724 / 1, ASTM e1164, din5033 teil7;
- Adopts combined LED light source with high life and low power consumption;
- Customized one 8mm or 4mm aperture (the flat/ tip measuring aperture can be switched easily, which is suitable for more tested sample)
- Dual optical path system, the optical resolution in the visible range is less than 10nm, which can measure the SCI and SCE spectrum of the sample at the same time;
- Accurate spectrum and lab data, used for color matching and accurate color transmission;
- High hardware configuration: 3.5-inch TFT true color screen, capacitive touch screen, 1000 line blazed grating, silicon photocell array detector with large photosensitive area, etc;
- USB interface,convenient for expansion of various functions;
- Super dirt resistant and stable standard white calibration board;
- Large capacity storage space, which can store more than 20000 pieces of test data
- 2/10 standard observer's angle, multiple light source modes, multiple surface color systems, can meet various standards of chromaticity indicators, and the needs of various customers for color measurement;
- Camera locating position and Stabilizer cross measurement position;
- PC software has powerful function expansion;

Specification

Model	SP-CLR760
Optical Geometry	Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle);
	SCI (specular component included)/SCE (specular component excluded) ,excluded UV
	light source;
	Conforms to CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7;
Characteristic	Customized one aperture, It is used for precise color measurement and quality control in
	plastic electronics, paint and ink, textile and garment printing and dyeing, printing,
	ceramics and other industries, and for fluorescent sample measurement.

Specification

Model	SP-CLR760
Integrating Sphere Size	Φ40mm
Light Source	Combined full spectrum LED light source
Spectrophotometric Mode	Flat Grating
Sensor	Silicon photodiode array (double row 40 groups)
Wavelength Range	400~700nm
Wavelength Interval	10nm
Semiband Width	10nm
Measured Reflectance Range	0-200%
Measured Aperture	Customized one aperture: MAV:Φ8mm/Φ10mm； SAV:Φ4mm/Φ5mm
Specular Component	SCI&SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,βxy,Munsell(C/2)
Color Difference Formula	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00
Other Colorimetric Index	WI(ASTM E313， CIE/ISO,AATCC,Hunter),
	YI(ASTM D1925， ASTM 313),
	Staining Fastness, Color Fastness, Color Strength, Opacity,
	8° Glossiness,
Observer Angle	2°/10°
Illuminant	D65,A,C,D50,F2(CWF),F7(DLF),F10(TPL5),F11(TL84),F12(TL83/U30)
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph,
	PASS/FAIL Result, Color Offset
Measurement Time	About 1.5s (Measure SCI & SCE about 3.2s)
Repeatability	Spectral reflectance: MAV/SCI, Standard deviation within 0.1% (400 nm to 700 nm:
	within 0.2%)
	Chromaticity value: MAV/SCI, within ΔE*ab 0.04 (When a white calibration plate is
	measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.2
	(Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Camera Locating,stabilizer cross position
Dimension	L*W*H=129X76X217mm
Weight	Approx 600g
Battery	3.7V,5000mAh Li-ion battery, 6000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Displayed Data	3.5-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB
Data Storage	Standard 1000 Pcs, Sample 20000 Pcs
Language	Simplified Chinese, English, traditional Chinese
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, User Guide, PC Software(Download from office website), USB cable,
	White and Black Calibration Cavity, Protective Cover, Wrist strap, One aperture (8mm
	or 4mm)
Optional Accessory	Micro Printer, Powder Test Box
Notes	The specifications are subject to change without notice.

Colorimeter

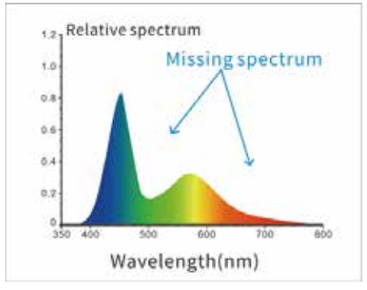
SP-CLR8

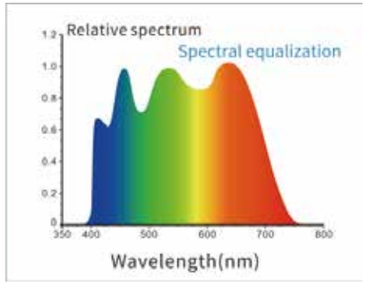


Description

The SP-CLR8 is a portable spectrophotometer. It uses a built-in silicon photodiode array sensor and an imported white board, while the repeatability ΔE*ab can be easily controlled within 0.04. Its powerful performance configuration and excellent inter-instrument error make color measurement more professional, while also ensuring the consistency of measurement data across multiple devices.

Features





Adopts full-band balanced LED light source

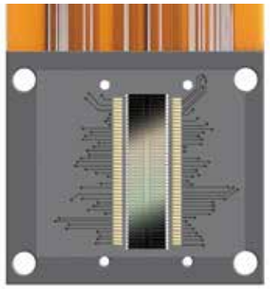
The full-band balanced LED light source ensures sufficient spectral distribution in the visible light range, avoids the lack of spectrum of white LEDs in a specific band, and ensures the measurement speed of the instrument and the accuracy of the measurement results.



Grating Spectrophotometric technology

Using grating spectrophotometric technology, it has higher resolution and makes color measurement more accurate.

Features



Silicon photodiode array (double 32 array) sensor

The dual-32 array sensor with larger area has strong light but not saturate, higher sensitivity of low light and wider spectral response range, which ensures the measurement speed, accuracy, stability and consistency of the instrument.



Place the base safely to ensure that the whiteboard is not dirty.



Professional whiteboard



Fast charging

Special fast charging method, low-voltage reminder to charge or use of off-hours to charge, ensures the capacity and life of the battery (note: frequent repeated charging of the battery causes much harm).



Customize a single measuring aperture to accurately meet the needs of sample measurement

The SP-CLR8 spectrophotometer offers Ø8mm or Ø4mm platform apertures to meet your specific sample measurement requirements.



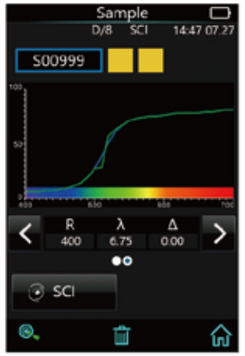
Excellent inter-instrument error and repeatability to ensure the consistency of measurement data across multiple devices.

Features



Novel and fashionable appearance design based on ergonomics

The position of the hand grip and the measurement button are carefully designed to meet different gripping habits. The smooth and fine surface is derived from the art of high-precision appearance processing.





Diversified data display

The SP-CLR8 spectrophotometer can intuitively display reflectance (reflectance at three specific wavelengths specified by the user), sample chromaticity values, color difference values/graphs, pass/fail results, color simulation, color offset, and other data. This is convenient to view and also greatly improves the user's work efficiency.

Specification

Model	SP-CLR8
Optical Geometry	D/8 (diffuse illumination, 8° direction reception)
	SCI measurement
	Comply with standard CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724-1, ASTM E1164, DIN5033 Teil7
Characteristics	Customized single measurement aperture for accurate color difference control in plastic and electronic, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries.
Integrating Sphere Size	Φ40mm
Light Source	Combined full-spectrum LED light source
Spectroscopic Method	Planar grating
Sensor	Silicon photodiode arrays (dual row 32 groups)

Specification

Model	SP-CLR8
Wavelength Range	400~700nm
Wavelength Interval	10nm
Semiband Bandwidth	10nm
Measurement Range	L: 0~120
	Reflectivity: the instrument can test the reflectivity at 3 specific wavelengths specified by the user (default 440nm, 550nm, 600nm)
Measurement Aperture	Single aperture: Φ8mm (Φ4mm optional)
Focusing Method	Fixed focus
Specular Component	SCI
Color Space	CIE LAB, XYZ, Yxy, LCh
Color Difference Formula	ΔE*ab, ΔE*00
Observer Angle	10°
Illuminant	D65, A, F2 (CWF)
Displayed Data	Reflectivity (at 3 specific wavelengths specified by the user), chromaticity value, color difference value/graph, pass/fail result, color simulation, color offset
Display Accuracy	0.01
Measurement Time	Approx. 1.5s
Repeatability	Chromaticity value: MAV/SCI, ΔE*ab within 0.04 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, within ΔE*ab 0.35 (Average for 12 BCRA Series II color tiles)
Measurement Method	Single measurement, average measurement (2~99 times)
Locating Method	Stabilizer locating
Battery Power	Lithium battery, 6000 times in 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	TFT true color 3.5inch, capacitive touch screen
Data Port	USB, Bluetooth® 5.0
Data Storage	500 standard samples, 1,0000 samples
Language	English
Operating Temperature Range	0~40 ℃, 0~85%RH (no condensation), altitude < 2000m
Storage Temperature Range	-20~50 ℃, 0~85%RH (no condensation)
Standard Accessories	Power adapter, data cable, manual, black and white calibration box, protective cover, wrist strap, single aperture: Ø8mm (optional Ø4mm) platform aperture
Optional Accessories	USB micro printer, powder test box, Bluetooth micro printer, holder base
External Dimensions(L*W*H)	81*71*214mm
Weight	About 460g

Note: Technical specifications are for reference only and are subject to the actual product.

Colorimeter

SP-CLR9



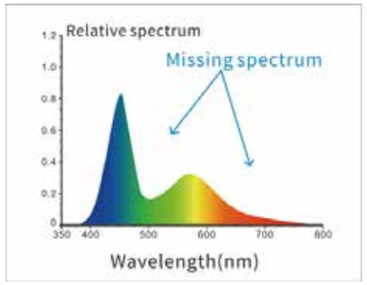


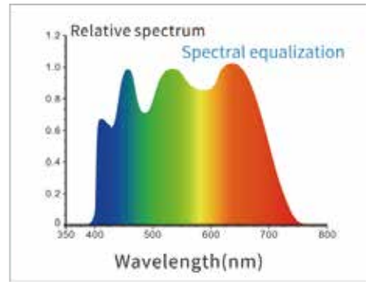


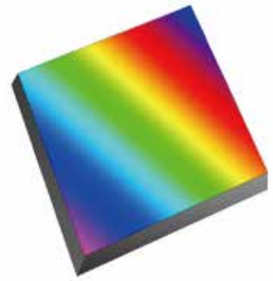
Description

The SP-CLR8 is a portable spectrophotometer. It uses a built-in silicon photodiode array sensor and an imported white board, while the repeatability ΔE*ab can be easily controlled within 0.04. Its powerful performance configuration and excellent inter-instrument error make color measurement more professional, while also ensuring the consistency of measurement data across multiple devices.

Features





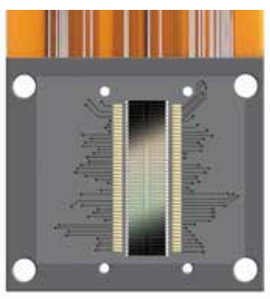


Adopts full-band balanced LED light source

The full-band balanced LED light source ensures sufficient spectral distribution in the visible light range, avoids the lack of spectrum of white LEDs in a specific band, and ensures the measurement speed of the instrument and the accuracy of the measurement results.

Grating Spectrophotometric technology

Using grating spectrophotometric technology, it has higher resolution and makes color measurement more accurate.



Silicon photodiode array (double 32 array) sensor

The dual-32 array sensor with larger area has strong light but not saturate, higher sensitivity of low light and wider spectral response range, which ensures the measurement speed, accuracy, stability and consistency of the instrument.



Place the base safely to ensure that the whiteboard is not dirty.



Professional whiteboard

Features



Fast charging

Special fast charging method, low-voltage reminder to charge or use of off-hours to charge, ensures the capacity and life of the battery (note: frequent repeated charging of the battery causes much harm).



Novel and fashionable appearance design based on ergonomics

The position of the hand grip and the measurement button are carefully designed to meet different gripping habits. The smooth and fine surface is derived from the art of high-precision appearance processing.



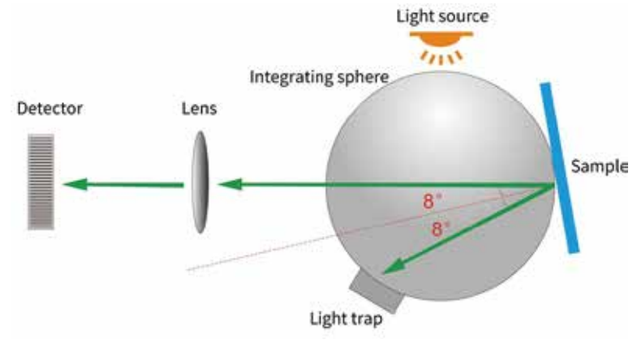
Equipped with 4/8mm dual measuring apertures to meet the measurement needs of different samples

The SP-CLR9 spectrophotometer offers Ø8mm and Ø4mm platform apertures to meet your specific sample measurement requirements.



Camera positioning for clear observation of the measured area

The SP-CLR9 spectrophotometer has a built-in camera for framing and positioning. Through the real-time framing of the camera, it can accurately determine whether the measured part of the object is the center of the target, thereby improving measurement efficiency and accuracy.



Adopts the internationally used D/8 SCI/SCE synthesis technology

The D/8 (SCI/SCE) measurement structure is adopted to reflect the color itself more objectively, and reduce the influence of the surface texture of the object on the test results.

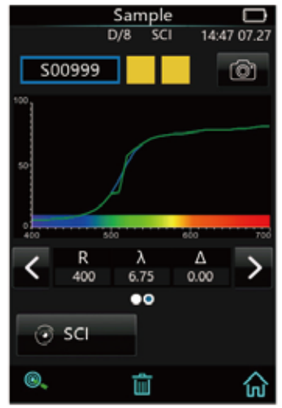


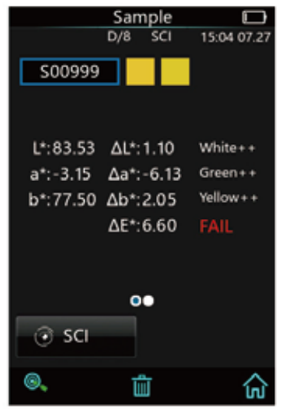
Excellent inter-instrument error and repeatability to ensure the consistency of measurement data across multiple devices.



Multiple color spaces and multiple observation light sources

It provides CIE LAB, XYZ, Yxy, LCh, CIE LUV, s-RGB, βxy, DIN Lab9, DIN Lab99 Munsell (C/2) color spaces, as well as multiple observation light sources including D65, A, C, D50, D55, D75, F1, F2 (CWF), F3, F4, F5, F6, F7 (DLF), F8, F9, F10 (TPL5), F11 (TL84), and F12 (TL83/U30), which can meet the special measurement needs under different measurement conditions.





Diversified data display

The SP-CLR9 spectrophotometer can intuitively display reflectance graphs/values, sample chromaticity values, color difference values/graphs, pass/fail results, color simulation, color offset, and other data. This is convenient to view and also greatly improves the user's work efficiency.





Specification

Model	SP-CLR9
Optical Geometry	D/8 (diffuse illumination, 8° direction reception)
	SCI/SCE measurement
	Comply with standard CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724-1, ASTM E1164, DIN5033 Teil7
Characteristics	Dual measurement aperture, wider adaptability; used for accurate color measurement and quality control in plastic and electronic, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries
Integrating Sphere Size	Φ40mm
Light Source	Combined full-spectrum LED light source, UV light source
Spectroscopic Method	Planar grating
Sensor	Silicon photodiode arrays (dual row 32 groups)
Wavelength Range	400~700nm
Wavelength Interval	10nm
Semiband Bandwidth	10nm
Measurement Range	L: 0~120
	Reflectivity: 0~200%

Specification

Model	SP-CLR9
Measurement Aperture	Dual apertures: Φ8mm, Φ4mm
Focusing Method	Optical focus
Specular Component	SCI&SCE
Color Space	CIE LAB, XYZ, Yxy, LCh, CIE LUV, s-RGB, βxy, DIN Lab9, DIN Lab99 Munsell (C/2)
Color Difference Formula	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00, DINΔE99
Other Colorimetric Indexs	WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), Metamerism index Mt, staining fastness, color fastness, strength, opacity, color card search
Observer Angle	2°/10°
Illuminant	D65, A, C, D50, D55, D75, F1, F2 (CWF), F3, F4, F5, F6, F7 (DLF), F8, F9, F10 (TPL5), F11 (TL84), F12 (TL83/U30)
Displayed Data	Spectrogram/data, chromaticity value, color difference value/graph, pass/fail result, color simulation, color offset
Display Accuracy	0.01
Measurement Time	Approx. 1.5s (Measure SCI & SCE about 3.2s)
Repeatability	Chromaticity value: MAV/SCI, ΔE*ab within 0.03 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, within ΔE*ab 0.3 (Average for 12 BCRA Series II color tiles)
Measurement Method	Single measurement, average measurement (2~99 times)
Locating Method	Camera locating, stabilizer locating
Battery Power	Lithium battery, 6000 times in 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	TFT true color 3.5inch, capacitive touch screen
Data Port	USB, Bluetooth® 5.0
Data Storage	1000 standard samples, 30,000 samples (a piece of data can include SCI/SCE at the same time)
Language	English
Operating Temperature Range	0~40℃, 0~85%RH (no condensation), altitude < 2000m
Storage Temperature Range	-20~50℃, 0~85%RH (no condensation)
Standard Accessories	Power adapter, data cable, manual, black and white calibration box, protective cover, wrist strap, dual aperture: Ø8mm + Ø4mm platform aperture
Optional Accessories	USB micro printer, powder test box, Bluetooth micro printer, holder base
External Dimensions(L*W*H)	81*71*214mm
Weight	About 460g

Note: Technical specifications are for reference only and are subject to the actual product.

Portable Spectrophotometer Concave Grating

SP-CLR306 SP-CLR301



Description

Perfect combination of beautiful appearance and the human body mechanics structural design;

B.D/8 geometrical optics, conforms with CIE No.15,GB/T 3978,GB2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil

Measure sample spectra, accurate Lab data , can be used in color matching and accurate color transmission;

Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colori-metric data, meet a variety of customers' demand for color measurement;

High electronic hardware configuration: 3.5-inch TFT color LCD,Capacitive Touch Screen, concave grating, 256 limage Element Double Arrays CMOS Image Sensor;

Application

Use long life and low power consumption combined LED light source

USB port, widely useful;Camera Locating Function, better position;

Switchable 8mm/4mm aperture, support both SCI and SCE at the same time;

Super stain-resistant and stable standard white calibration plate;

Large capacity storage space, over 20,000 measurement data;

PC software has a powerful func-tion extension.







Specifications

Model	SP-CLR306	SP-CLR301
Optical Geometry	Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)	
Integrating Sphere Size	48mm	
Light Source	Combined LED Light, UV Light	Combined LED Light
Spectrophotometric Mode	Concave Grating	
Sensor	256 Image Element Double Array CMOS Image Sensor	
Wavelength Range	400-700nm	
Wavelength Interval	10nm	
Semiband Width	10nm	
Measured Reflectance Range	0-200%	
Measuring Aperture	Dual Aperture: 10mm/8mm & 5mm/4mm	Single Aperture: 8mm/10mm
Specular Component	SCI&SCE	
Color Space	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB	
Color Difference Formula	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00v, ΔE(Hunter)	
Other Colorimetric Index	WI(ASTM E313, CIE/ISO, AATCC, Hunter), YI(ASTM D1925, ASTM 313),TI(ASTM E313, CIE/ISO), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity, 8° Glossiness	
Observer Angle	Observer Angle 2°/10°	
Illuminant	D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12	D65, A, C, D50
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset	
Measuring Time	2.6s	
Repeatability	MAV/SCI: ΔE*≤0.03	MAV/SCI: ΔE*≤0.06
Inter-instrument Error	MAV/SCI: ΔE*≤0.15	MAV/SCI: ΔE*≤0.4
Measurement Mode	Single Measurement, Average Measurement	
Locating Method	Camera View Finder Locating	
Battery	Li-ion battery. 5000 measurements within 8 hours	
Dimension	L*W*H=184*77*105mm	
Weight	600g	
Illuminant Life Span	5 years, more than 3 million times measurements	
Display	3.5-inch TFT color LCD, Capacitive Touch Screen	
Data Port	USB, Bluetooth 4.0	USB
Data Storage	Standard 2000 Pcs, Sample 20000 Pcs	
Language	English, Chinese	
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m	
Storage Environment	-20~50℃, 0~85%RH (no condensing)	
Standard Accessory	Power Adapter, Built-In Li-ion Battery, User Guide, PC Software, White and Black Calibration Cavity, Dust Cover	
Optional Accessory	Micro Printer, Powder Test Box	
Notes:	The specifications are subject to change without notice.	

Portable Spectrophotometer Concave Grating

SP-CLR456



Features

High accruacy spectrophotometer is used for accurate analysis and transmission of laboratory color.

- Apply in paints, inks, textiles, garments, printing and dyeing, printing etc industries for color transfer and quality control, also for Fluorescence sample color measurement.
- It is used to measure the brightness factor and color coordinates of traffic signs, markings and reflective films.
- It contains GB 2893 and GB/T 18833 standard colors.
- It can customize the rectangular tolerance of polygons manually.



Description

High electronic hardware configuration: 3.5-inch TFT color LCD,Capacitive Touch Screen, concave grating, 256 Iimage Element Double Arrays CMOS Image Sensor;

Beautiful appearance and perfect combination with ergonomic structure design;

Built-in standard polygon tolerance setting and specific traffic sign gamut, one button to realize the measurement of traffic road signs, marking lines, reflective film brightness factor and chromaticity coordinates;

45/0 geometrical optics, conforms with CIE No.15,GB/T 3978,GB 2893,GB/T 18833,I-SO7724/1,ASTM E1164,DIN5033 Teil7,GB 2893,G-B/T 18833;

Measure sample spectra, accurate Lab data , can be used in color matching and accurate color transmission;

Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data, meet a variety of customers' demand for color measurement;





Adopt high-life and low-power combined LED light source, including UV/excluding UV;

USB port, widely useful

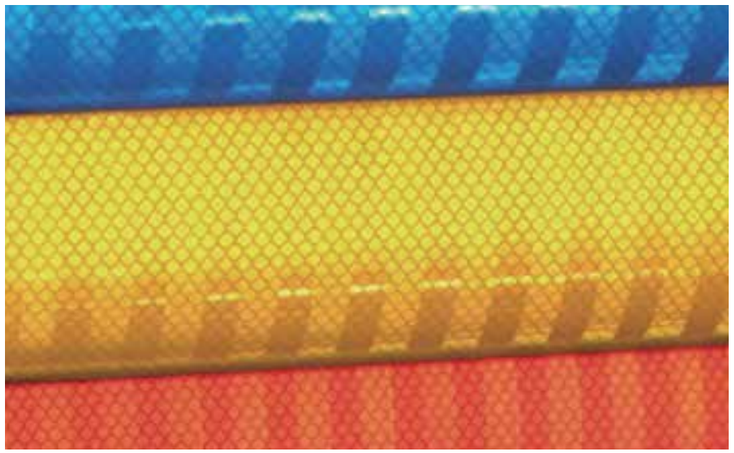
Optional aperture 4mm/8mm,-adapt to more samples to be tested;

Super stain-resistant and stable standard white calibration plate;

Large capacity storage space, over 30,000 measurement data;

PC software has a powerful function extension





Specifications

Model		SP-CLR456
Illumination/Observation system		SP-CLR456(45 ring-shaped illumination, vertical viewing);
		Comply with CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724-1, ASTM E1164, DIN5033 Teil7, GB 2893, GB/T 18833
Integrating Sphere Size		Φ48mm
Light Source		Combined LED Light, UV Light
Spectral separation device		Concave Grating
Detector		256 Image Element Double Array CMOS Image Sensor
Wavelength Range		400~700nm
Wavelength Pitch		10nm
Half Bandwidth		10nm
Reflectance Range		0~200%
Measuring Aperture		MAV:Φ8mm/Φ10mm; SAV:Φ4mm/Φ5mm
Color Space		CIE LAB,XYZ,Yxy,LCh,CIE LUV,HunterLAB,βxy
Color Difference Formula		ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00,ΔE(Hunter)
Other Colorimetric Index		WI(ASTM E313, CIE/ISO,AATCC,Hunter) ,
		YI(ASTM D1925, ASTM 313),
		MI (Metamerism Index),
		Staining Fastness, Color Fastness, Color Strength, Opacity, Supporting Colorimetric Polygon Tolerance
Observer Angle		2°/10°
Illuminant		D65, A, C, D50, D55, D75, F1, F2(CWF), F3, F4, F5, F6, F7(DLF), F8, F9, F10(TPL5), F11(TL84), F12(TL83/U30)
Display Data		Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
Measurement Time		About 1.5s
Repeatability		Spectral reflectance: MAV,Standard deviation within 0.08% (400 nm to 700 nm: within 0.18%)
		Chromaticity value:within ΔE*ab 0.03 (When a white calibration plate is measured 30 times at 5 second intervals
		after white calibration)
Inter-instrument Error		Within ΔE*ab 0.15(Average for 12 BCRA Series II color tiles)
Measurement mode		Single Measurement, Average Measurement(2-99)
Size(L*W*H)		184*77*105mm
Weight		About 600g
Power source		Li-ion battery. 5000 measurements within 8 hours
Illuminant Life Span		5 years, more than 3 million times measurements
Display		3.5-inch TFT color LCD, Capacitive Touch Screen
Interface		USB, Bluetooth 4.0
Data memory		Standard 1000 Pcs, Sample 30000 Pcs
Language		Chinese,English
Working Environment		Temperature: 0~40℃; Humidity: 0~85% (No Condensation);altitude: less than 2000 m
Storage Environment		Temperature: -20~50℃; Humidity: 0~85% (No Condensation)
Standard Accessory		Power Adapter, USB Cable, Built-in li-ion battery, User Manual, software(download from the website)White and
		Black Calibration Board, Protective Cover.
Optional Accessory		Micro Printer, Powder Test Box, Universal test components, Locating Plate
Notes:		The specifications are subject to change without notice.

Portable Spectrophotometer Concave Grating

SP-CLR458



Features

- 20mm aperture special design for traffic signs , It is used to measure the brightness factor and color coordinates of traffic signs, markings and reflective films.
- It contains GB 2893 and GB/T 18833 standard colors. It can customize the rectangular tolerance of polygons manually.
- It is used for accurate analysis and transmission of laboratory color, also for Fluorescence sample color measurement .
- Apply in paints, inks, textiles, garments, printing and dyeing, printing etc industries for color transfer and quality control.



Description

Beautiful appearance and perfect combination with ergonomic structure design;

45/0 geometric optical structure, in accordance with CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7, GB 2893, GB/T 18833;

Two standard observers, multiple light source modes, multiple color systems, and a variety of standard colorimetric indicators to meet the needs of various customers for color measurement;

High electronic hardware configuration: 3.5-inch TFT true color screen, capacitive touch screen, concave grating, 256-pixel dual-array CMOS detector, etc.;

Built-in standard polygon tolerance setting and specific traffic sign gamut, especially suitable for traffic signage brightness factor and chromaticity performance judgment;

Measure sample spectra, accurate Lab data , can be used in color matching and accurate color transmission;





Adopt high-life and low-power combined LED light source, including UV/excluding UV

USB/Bluetooth 4.0 (compatible with 2.1) dual communication mode, more adaptable;

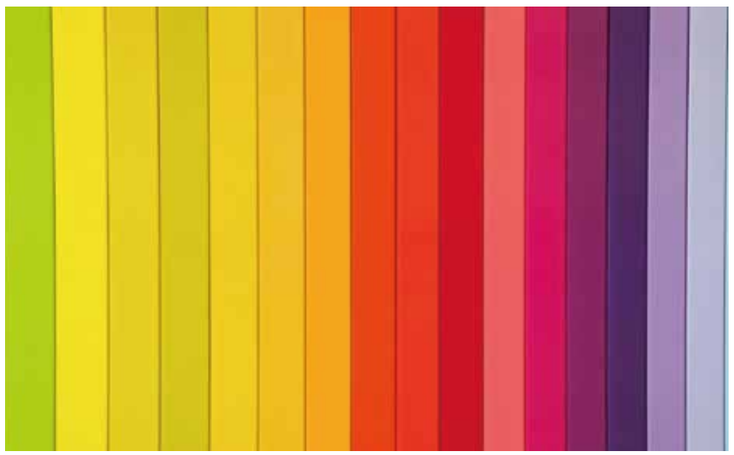
Φ20mm aperture adapt to larger samples or uneven samples;

Super stain-resistant and stable standard white calibration plate;

Large-capacity storage space, can store more than 30,000 test data;

PC software has powerful function extensions;





Specifications

Model		SP-CLR458
Illumination/Observation system		45/0(45 ring-shaped illumination, vertical viewing);
		Comply with CIE No.15，GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7,GB 2893、GB/T 18833
Integrating Sphere Size		Φ48mm
Light Source		Combined LED Light, UV Light
Spectral separation device		Concave Grating
Detector		256 Image Element Double Array CMOS Image Sensor
Wavelength Range		400~700nm
Wavelength Pitch		10nm
Half Bandwidth		10nm
Reflectance Range		0~200%
Measuring Aperture		Φ20mm
Color Space		CIE LAB,XYZ,Yxy,LCh,CIE LUV，HunterLAB,βxy
Color Difference Formula		ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00,ΔE（Hunter）
Other Colorimetric Index		WI(ASTM E313，CIE/ISO,AATCC,Hunter)，
		YI(ASTM D1925，ASTM 313),
		TI(ASTM E313，CIE/ISO),
		MI (Metamerism Index),
		Staining Fastness, Color Fastness, Color Strength, Opacity,Supporting Colorimetric Polygon Tolerance
Observer Angle		2°/10°
Illuminant		D65,A,C,D50,D55,D75,F1,F2(CWF),F3,F4，F5，F6,F7(DLF),F8,F9，F10(TPL5),F11(TL84),F12(TL83/U30)
Display Data		Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
Measurement Time		About 1.5s
Repeatability		Spectral reflectance: Standard deviation within 0.1% (400 nm to 700 nm: within 0.2%)
		Chromaticity value:within ΔE*ab 0.04 (When a white calibration plate is measured 30 times at 5 second intervals
		after white calibration)
Inter-instrument Error		Within ΔE*ab 0.2 (Average for 12 BCRA Series II color tiles)
Measurement mode		Single Measurement, Average Measurement(2-99)
Size(L*W*H)		184*77*105mm
Weight		About 600g
Power source		Li-ion battery. 5000 measurements within 8 hours
Illuminant Life Span		5 years, more than 3 million times measurements
Display		3.5-inch TFT color LCD, Capacitive Touch Screen
Interface		USB, Bluetooth 4.0
Data memory		Standard 1000 Pcs, Sample 30000 Pcs
Language		Chinese,English
Working Environment		Temperature: 0~40℃; Humidity: 0~85% (No Condensation);altitude: less than 2000 m
Storage Environment		Temperature: -20~50℃; Humidity: 0~85% (No Condensation))
Standard Accessory		Power Adapter, USB Cable, Built-in li-ion battery, User Manual, software(download from the website)White and
		Black Calibration Board, Protective Cover.
Optional Accessory		Micro Printer, Powder Test Box, Universal test components, Locating Plate
Notes:		The specifications are subject to change without notice.

Grating Spectrophotometer Benchtop Type

SP-CLR601



Description

Built-in camera locating.

Big capacity data storage, for 20000 pieces test result.

More powerful extended functions at the PC software.

Double Array 256 Image Element CMOS Sensor; Long life-span stable LED, UV LED.

Built-in temperature sensor to monitor and compensate the measured temperature to ensure the measurement more precise.

Auto identify measured aperture. Freely switchable between 4 measuring apertures: ϕ 25.4mm/15mm/8mm/4mm. Users also can customize apertures.

Description

Wavelength range 360nm – 780nm. Built-in 400nm cut off.

High configuration of hardware:
7 inches TFT Color Capacitive Touch-screen Display; Concave Grating

Independent light source detector, can continuously monitor the condition of light sources to ensure the light source reliable.

Multiple measurement modes: Quality Management Mode, Sample Mode; Meet more users' requirements.

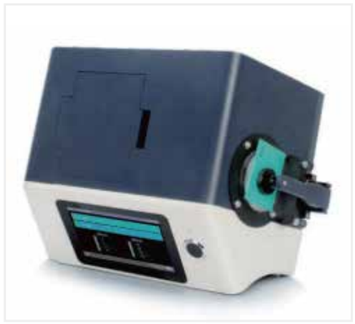
A variety of optional accessories: Reflection sample holding tool, transmission fixture, micro 4mm aperture transmission test components, and instrument inversion test components, applicable to more working conditions;

With reflective and transmissive spectrum, and accurate Lab value, it is good to calculate color formula and do precise color transmission.

Application Industry

- SP-CLR601 benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories.
- It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.









Specifications

Optical Geometry

Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle) ;

SCI (specular component included)/SCE (specular component excluded) ; Include UV / excluded UV light source

Transmittance: di:0°, de:0° (diffuse illumination: 0° viewing) ;

SCI (specular component included)/SCE (specular component excluded) ; Include UV / excluded UV light source;

Haze(ASTM D1003),

Conforms to CIE No.15 , GB/T 3978,GB 2893,GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7

Other Colorimetric Index

WI (ASTM E313, CIE/ISO, AATCC, Hunter),

YI (ASTM D1925, ASTM 313),

TI (ASTM E313, CIE/ISO),

MI (Metamerism Index),

Staining Fastness, Color Fastness, Color Strength, Opacity,

8° Glossiness,Gardner Index, Pt-Co Index, 555 Index, Haze(ASTM D1003)

Repeatability

Spectral reflectance: Φ25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%)

Chromaticity value:Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.02 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Spectral Transmittance: Φ25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%)

Chromaticity value:Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.03 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)

Specifications

Model	SP-CLR601
Application	It is used for accurate analysis and transmission of laboratory color. Apply in paints, inks, textiles, garments, printing and dyeing, printing etc industries for color transfer and quality control.
Integrating Sphere Size	Φ154mm
Light Source	360 nm to 780 nm, Combined LED Light, 400nm cut-off light source
Spectrophotometric Mode	Concave Grating
Sensor	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	360-780nm
Wavelength Interval	10nm
Semiband Width	10nm
Measured Reflectance Range	0-200%
Measuring Aperture	Reflective : Φ30mm/Φ25.4mm, Φ10mm/Φ8mm, Φ6mm/Φ4mm; Transmissive : Φ30mm/Φ25mm; Remark: 1. Automatic identification of switch caliber 2. Customized Configuration caliber and lens position
Specular Component	Reflectance: SCI&SCE / Transmittance: SCI&SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,s-RGB,HunterLab,βxy,DIN Lab99
Color Difference Formula	ΔE * ab ,ΔE * uv ,ΔE * 94 ,ΔE * cmc(2:1) ,ΔE * cmc(1:1) ,ΔE * 00 , DINΔE 99 ,ΔE (Hunter),
Observer Angle	2°/10°
Illuminant	D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Measuring Time	About 2.4s (Measure SCI & SCE about 5s)
Inter-instrument	Φ25.4mm/SCI, Within ΔE*ab 0.15 (Average for 12 BCRA Series II color tiles)
Dimension	L*W*H=370x300x200mm
Weight	Approx. 9.6kg
Power	AC 24V, 3A Power adapter power supply
Illuminant Life Span	5 years, more than 3 million times measurements
Display	7-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB & Print serial port
Data Storage	Standard 2000 Pcs, Sample 20000 Pcs
Language	Simplified Chinese, Traditional Chinese, English,
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, User Guide, CD Disk(PC Software), USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4 caliber, 8 caliber, 4 caliber
Optional Accessory	Micro-printer, Transmissive Test Component, Micro Aperture(4mm) transmission test clamp component, Instrument inversion components
Notes	The specifications are subject to change without notice.

Grating Spectrophotometer Benchtop Type

SP-CLR606



Description

Built-in camera locating.

Big capacity data storage, for 40000 pieces test result.

More powerful extended functions at the PC software.

Double Array 256 Image Element CMOS Sensor; Long life-span stable LED, UV LED.

Built-in temperature sensor to monitor and compensate the measured temperature to ensure the measurement more precision.

Auto identify measured aperture. Freely switchable between 4 measured apertures: φ 25.4mm/15mm/8mm/4mm. Users also can customize apertures.

Description

Wavelength range 360nm – 780nm. Built-in 400nm cut off/420nm cut off.

High configuration of hardware: 7 inches TFT Color Capacitive Touch-screen Display; Bluetooth 2.1; Concave Grating.

Independent light source detector, can continuously monitor the condition of light sources to ensure the light source reliable.

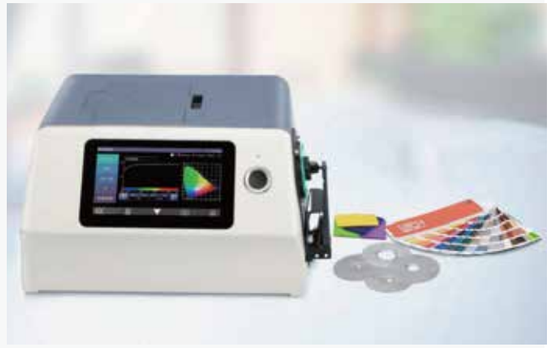
Multiple measurement modes: Quality Management Mode, Sample Mode; Meet more users' requirements.

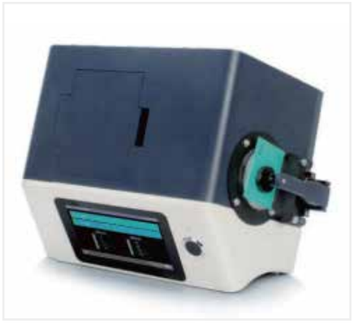
A variety of optional accessories: Reflection sample holding tool, transmission fixture, micro 4mm aperture transmission test components, and instrument inversion test components, applicable to more working conditions;

With reflective and transmissive spectrum, and accurate Lab value, it is good to calculate color formula and do precise color transmission.

Application Industry

- SP-CLR606 benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories.
- It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.









Specifications

Optical Geometry
Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle) ;
SCI (specular component included)/SCE (specular component excluded) ; Include UV / excluded UV light source
Transmittance: di:0°, de:0° (diffuse illumination: 0° viewing) ;
SCI (specular component included)/SCE (specular component excluded) ; Include UV / excluded UV light source;
Haze(ASTM D1003),
Conforms to CIE No.15， GB/T 3978,GB 2893,GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7

Other Colorimetric Index
ΔE * ab ,ΔE * uv ,ΔE * 94 ,ΔE * cmc(2:1) ,ΔE * cmc(1:1) ,ΔE * 00 , DINΔE 99 ,ΔE (Hunter),
WI (ASTM E313, CIE/ISO, AATCC, Hunter),
YI (ASTM D1925, ASTM 313),
TI (ASTM E313, CIE/ISO),
MI (Metamerism Index),
Staining Fastness, Color Fastness, Color Strength, Opacity,
8° Glossiness,Gardner Index, Pt-Co Index, 555 Index, Haze(ASTM D1003) Saybolt, Color Code (ASTM D1500)

Repeatability
Spectral reflectance: Φ25.4mm/SCI, Standard deviation within 0.04% (400 nm to 700 nm: within 0.04%)
Chromaticity value:Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.01 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Spectral Transmittance: Φ25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%)
Chromaticity value:Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.02 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)

Specifications

Model	SP-CLR606
Application	It is used for accurate analysis and transmission of laboratory color. Apply in paints, inks, textiles, garments, printing and dyeing, printing etc industries for color transfer and quality control.
Integrating Sphere Size	Φ154mm
Light Source	360 nm to 780 nm, Combined LED Light, 400nm cut-off light source,420nmCut-off light source
Spectrophotometric Mode	Concave Grating
Sensor	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	360-780nm
Wavelength Interval	10nm
Semiband Width	5nm
Measured Reflectance Range	0-200%
Measuring Aperture	Reflective : Φ30mm/Φ25.4mm, Φ18mm/Φ15mm, Φ10mm/Φ8mm, Φ6mm/Φ4mm; Transmissive : Φ25.4mm; Remark: 1. Automatic identification of switch caliber 2. Customized Configuration caliber and lens position
Specular Component	Reflectance: SCI&SCE / Transmittance: SCI&SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,s-RGB,HunterLab,βxy,DIN Lab99
Color Difference Formula	ΔE * ab ,ΔE * uv ,ΔE * 94 ,ΔE * cmc(2:1) ,ΔE * cmc(1:1) ,ΔE * 00 , DINΔE 99 ,ΔE (Hunter),
Observer Angle	2°/10°
Illuminant	D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,DLF,TL83,TL84,TPL5,U30
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Measuring Time	About 2.4s (Measure SCI & SCE about 5s)
Inter-instrument Error	Φ25.4mm/SCI, Within ΔE*ab 0.12 (Average for 12 BCRA Series II color tiles)
Dimension	L*W*H=370x300x200mm
Weight	Approx. 9.6kg
Power	AC 24V, 3A Power adapter power supply
Illuminant Life Span	5 years, more than 3 million times measurements
Display	7-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB & Bluetooth & Print serial port
Data Storage	Standard 5000 Pcs, Sample 40000 Pcs
Language	Simplified Chinese, Traditional Chinese, English, (Optional Customized German, French and Spanish)
Operating Environment	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, User Guide, CD Disk(PC Software), USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4 caliber, 15 caliber, 8 caliber, 4 caliber,Transmissive Test Component,Micro Aperture(4mm) transmission test clamp component
Optional Accessory	Micro-printer, Instrument inversion components， Petri Dish
Notes	The specifications are subject to change without notice.

Portable Spectrophotometer Flat Grating

SP-CLR770



front

Description

Camera locating position and Stabilizer cross measurement position;

Large capacity storage space, which can store more than 30000 pieces of test data

PC software has powerful function expansion;

Adopt combined LED light source with high life and low power consumption, including UV / excluding UV;

USB / Bluetooth dual communication mode, wider adaptability; Super dirt resistant and stable standard white calibration board;

Switchable 8mm & 4mm aperture (the flat/ tip measuring aperture can be switched easily, which is suitable for more tested sample)

Portable Spectrophotometer

2/10 standard observer's angle, multiple light source modes, multiple surface color systems, meet various standards of chromaticity indicators, and the needs of various customers for color measurement;

High hardware configuration: 3.5-inch TFT true color screen, capacitive touch screen, 1000 line blazed grating, silicon photocell array detector with large photosensitive area, etc;

D / 8 geometric optical structure, conforming to CIE No.15, GB / T 3978, GB 2893, GB / T 18833, iso7724 / 1, ASTM e1164, din5033 teil7;

Accurate spectrum and lab data, used for color matching and accurate color transmission;

Dual optical path system, the optical resolution in the visible range is less than 10nm, which can measure the SCI and SCE spectrum of the sample at the same time;







Specifications

Optical Geometry
Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)
SCI (specular component included)/SCE (specular component excluded); Include UV / excluded UV light source
Conforms to CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7

Other Colorimetric Index
WI(ASTM E313， CIE/ISO,AATCC,Hunter),
YI(ASTM D1925， ASTM 313),
Metamerism Index MI,
Staining Fastness, Color Fastness, Color Strength, Opacity,
8° Glossiness,555 tone classification

Repeatability
Spectral reflectance: MAV/SCI, Standard deviation within 0.08% (400 nm to 700 nm: within 0.18%)
Chromaticity value: MAV/SCI, within ΔE*ab 0.02 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)

Specifications

Model	SP-CLR770
Characteristic	double apertures for accurate color analysis and transmission in the laboratory It is used for precise color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries, and for fluorescent sample measurement.
Integrating Sphere Size	Φ40mm
Light Source	Combined full spectrum LED light source, UV light source
Spectrophotometric Mode	Flat Grating
Sensor	Silicon photodiode array (double row 40 groups)
Wavelength Range	400~700nm
Wavelength Interval	10nm
Semiband Width	10nm
Measured Reflectance Range	0-200%
Measuring Aperture	MAV:Φ8mm/Φ10mm； SAV:Φ4mm/Φ5mm
Specular Component	SCI&SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,HunterLab,βxy,DIN Lab99 Munsell(C/2)
Color Difference Formula	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00, DINΔE99,ΔE(Hunter)
Observer Angle	2°/10°
Illuminant	D65,A,C,D50,D55,D75,F1,F2(CWF), F3,F4,F5,F6,F7(DLF),F8,F9,F10(TPL5),F11(TL84),F12(TL83/U30)
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Measuring Time	About 1.5s (Measure SCI & SCE about 3.2s)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.15 (Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Camera Locating,stabilizer cross position
Dimension	L*W*H=129X76X217mm
Weight	Approx 600g
Battery	3.7V,5000mAh Li-ion battery, 6000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Displayed Data	3.5-inch TFT color LCD, Capacitive Touch Screen
Data Port	USB, Bluetooth 4.2
Data Storage	Standard 1000 Pcs, Sample 30000 Pcs
Language	Simplified Chinese, English, traditional Chinese
Operating	0~40℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, User Guide, PC Software(Download from office website), USB cable, White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture, 8mm tip aperture, 4mm flat aperture, 4mm tip aperture
Optional Accessory	Micro Printer, Powder Test Box
Notes	The specifications are subject to change without notice.

Portable Grating Spectrophotometer

SP-CLR520C





Features

20 kinds of color indexes and 26 kinds of illuminants

- Supports 26 kinds of illuminants such as D65/D50,etc.
- It can get the value of reflectance, CIE-Lab, CIE-LCh, whiteness, yellowness, opacity, color strength and other color indexes.

Excellent inter-instrument error

- Inter-instrument error＜0.2 which ensures test results consistency of multiple devices.

Auto calibration

- The revolutionary auto calibration technology allows the instrument to achieve automatic calibration, which greatly improves the user experience.

Switchable Apertures 11mm/6mm/1*3mm

- Durable and stable aperture size to measure samples with different sizes.

UV Included/ UV Excluded

- UV Included/ UV Excluded to measure color and color difference for samples with fluorescence.

Multi-function calibration base

- The multi-function calibration base keeps the white tile being protected, combining calibration and charging functions in one.
- When instrument is placed on the base, it will be automatically charged and calibrated. It saves a lot of time for the user to charge and calibration the device.

The camera can clearly observe the measured area

- With Integrated camera to see the measurement area for accurate test.

Description

- Portable Grating Spectrophotometer has powerful performance configuration which makes color measurement more professional. Excellent inter-instrument error ensures consistency of the measurement data of multiple devices.

Specifications

Model	SP-CLR520C
Optical Geometry	D/8（diffused illumination,8° viewing） SCI（specular component included），SCE（specular component excluded）
Integrating Sphere Size	φ40mm
Light Source	Full waveband balanced LED
Color Space and Index	Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB, Color difference(ΔE*ab, ΔE*cmc, ΔE*94,ΔE*00),WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Blackness(My,dM),Color Fastness, Tint,(ASTM E313-00),Color Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Color strength
Illuminant	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,T
Observer Angle	L84
Sensor	2°,10°
Calibration	256 pixel CMOS sensor
Wavelength Interval	Auto
Wavelength Range	10nm
Measured Reflectance	400-700nm
Range	0-200%
Reflectance Resolution	0.01%
Repeatability	Chromaticity value: Max. :dE*ab< 0.04 Average :dE*ab< 0.03 Standard deviation within ΔE*ab 0.02 (When a whiteboard measures 30 times every 5 seconds) Reflectance: Standard deviation < 0.1%
Measuring Aperture	MAV:Φ8mm/Φ11mm MAV:Φ4mm/Φ6mm MINI:1*3mm
Inter-instrument Error	ΔE*ab＜0.2（BCRA Series Ⅱ, average measurement of 12 tiles，MAV/SCI）
Test Time	About 1s
Battery	Rechargeable, 8000 times continuous tests, 3.7V/3000mAh
Screen	2.4-inch IPS full color screen
Interface	USB，Bluetooth
Illuminant Life Span	1 million measurements in 10 years
Software Support	Android, IOS, Windows
Camera	With
External Dimension(L*W*H)	77.8*53.2*185.7mm
N.W./G.W.	0.3kg/1.5kg
Shipping Dimension(L*W*H)	320*170*290mm

Portable Grating Spectrophotometer

SP-CLR580A SP-CLR580B



Color QC Software

Our spectrophotometer comes with PC color QC software, which is applicable in various industries for management of color data. It is used for store test result, generate test report and print test report after connect with printer.

Description

- Portable Grating Spectrophotometer has powerful performance configuration which makes color measurement more professional. Excellent inter-instrument error ensures consistency of the measurement data of multiple devices.

Features

Adopt D/8 optical structure and SCI/SCE mode.

- Adopts D/8(diffused illumination, 8-degree viewing angle) which is widely applicable in the world, and SCI/SCE (specular component included/specular component excluded).

The camera can clearly observe the measured area.

- The built-in camera is used for view taking and positioning. Through real-time view taking, it can accurately determine whether the measured part of the object is the target center, which improves the measurement efficiency and accuracy.

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, and guarantees the speed of the measurement and the accuracy of the results.

Adopts Every Time Calibration Technology (ETC)

- The innovative ETC (Every Time Calibration) and standard whiteboard included in the optical system allow reliable accuracy and repeatability in every measurement.

Automatic gloss compensation technology

- Adopts automatic gloss compensation technology,which guarantees the accuracy of color measurement value for surfaces of different gloss.

Innovative light splitting SCS optical engine

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

Complete light sources compares with similar products

- Compared with similar products, our spectrophotometer provides the most complete 28 kinds of standard light sources and 40 kinds of measured color value indicators;
- It can also customize the measurement method according to your requirements to meet all your color measurement needs.

Specifications

Model	SP-CLR580A	SP-CLR580B
Optical Geometry	D/8(Diffused lighting, 8 degrees observe angle)、SCI(specular reflection included)/SCE(specular reflection excluded), simultaneous measurement. (conform to CIE No.15、ISO 7724/1、ASTM E1164、DIN 5033 Teil7、JIS Z8722 Condition c standards)	
Integrating Sphere Size	ϕ40mm, diffused reflection surface coating	
Light Source	CLEDs(entire wavelength balanced LED light source)	
Sensor	Dual light path sensor array	
Wavelength Range	400-700nm	
Wavelength Interval	10nm	
Half Spectral Width	5nm	
Measured Reflectance Range	0-200%	
Reflectance Resolution	0.01%	
Observer Angle	2°/10°	
Illuminant	A,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,DLF,TL83,TL84,NBF,U30,CWF	
Display	SPD distribution/data,sample's color values,color difference values/graph, pass/fail results, color error tendency, color simulation,display measurement area,history data color simulation,manual input standard sample,generate measurement report	
Measuring Time Interval	2s	
Measuring Time	1s	
Color Space	CIE-L*a*b, L*C*h, L*u*v, XYZ, Yxy, Reflectance	
Color Difference Formula	ΔE*ab, ΔE*CH, ΔE*uv, ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*94,ΔE*00	
Other Colorimetric 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(ASTM E313,CIE,Ganz) Metamerism index Milm, Stick color fastness, Color fastness, Covering power, force,Opacity, color strength	
Repeatability	Light splitting reflectivity:standard deviation within 0.08%	
	Color values:ΔE*ab<=0.03(After calibration, standard deviation of 30 measurements on test white board, 5 second intervals), Max.:0.05	
Measuring Aperture	ϕ10mm	ϕ4mm, 6mm



Specifications

Model	SP-CLR580A SP-CLR580B
Inter-instrument Error	ΔE*ab within 0.2(BCRA color charts II, average of the 12 charts)
Battery	Rechargeable, 10000 continuous tests, 7.4V/6000mAh
Interface	USB
Data Storage	20000 test results
Illuminant Life Span	1.5 million measurements in 5 years
Screen	True color screen that includes all colors
Operating Environment	0~45℃, relative humidity 80% or below(at 35°C),no condensation
Operating Environment	-25℃~55℃， relative humidity 80% or below(at 35°C),no condensation
Standard Accessory	DC adapter, Lithium battery, manual, color management software, drive software, electronic manual, color management guide, USB cable, black/white calibration tube, protective cover, spire lamella, portable bag, electronic color charts
Optional Accessory	Powder molding device, micro printer, measurement and test report
External Dimension(L*W*H)	181*73*112mm
Net Weight	About 0.55kg(excluding battery's weight)



Grating Spectrophotometer

SP-CLR700D



Application

It can be used for color matching in various industries, and is widely used in the quality control of painting industry, textile industry, plastic industry, food industry, building materials industry and other industries.



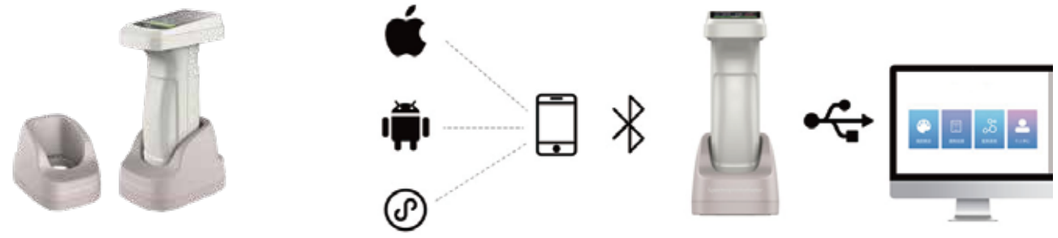
Features

Excellent repeatability and inter-instrument error
Max.repeatability: dE*ab≤0.04, inter-instrument error≤0.25.
The data is accurate and reliable, ensuring the consistency of measurement data from multiple devices, and can be used for color matching and precise color transfer.

Dual optical path array sensor
The dual optical path design monitors the energy fluctuation of the light source while measuring the sample signal, reduces interference during measurement, and obtains higher measurement stability;
The use of large-area dual-array sensors provides higher spectral response sensitivity.

Intelligent automatic calibration
The instrument is placed on the intelligent calibration base, and the instrument can be automatically calibrated without manual intervention through the whiteboard on the base. The white board made of ZrO2 with reflectivity R%>90% is used as the calibration standard, which ensures excellent mechanical strength and weather resistance.

Adopt full waveband balanced LED light source + UV light
The instrument uses a 360-700nm full-wave-band balanced LED light source and UV light source as the lighting source, which ensures sufficient spectral distribution in the visible and ultraviolet ranges, and materials with fluorescent components can also be measured.



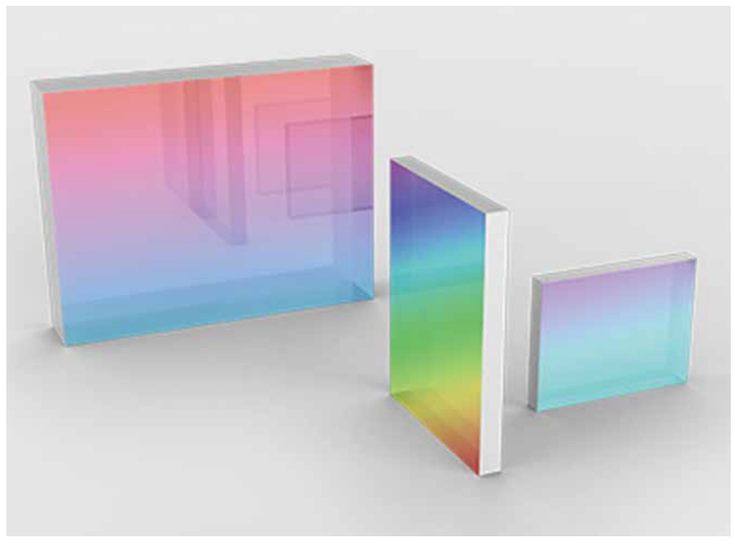
10nm resolution grating spectroscopic technology.
The grating combined with array sensor made by innovative MEMS technology makes color measurement more accurate based on 10nm spectral resolution.

Equipped with three measuring apertures.
Standard 8mm/4mm/1*3mm three measuring apertures,which can be replaced at any time without tools, meeting the measurement needs of various samples.

Provide 30+ measurement parameters and 37 evaluation light sources.
Provide a variety of measurement parameters and evaluation light sources. A variety of light sources and measurement indicators can be flexibly added through the mobile or PC program.

The camera can clearly observe the measured area.
The built-in camera is used for view taking and positioning. Through real-time view taking, it can accurately determine whether the measured part of the object is the target center, which improves the measurement efficiency and accuracy.





Specifications

Model	SP-CLR700D
Optical Geometry	D/8(diffused illumination, 8-degree viewing angle)，SCI+SCE
	(specular component included+specular component excluded)
Measuring Aperture	MAV: ϕ8mm/ ϕ11mm； SAV: ϕ4mm/ ϕ6mm； MINI:1*3mm
Light Source	Combined full spectrum LED light source, UV light source
Repeatability	Chromaticity value:
	Standard deviation dE*ab≤ 0.025
	Average: dE*ab≤ 0.025
	Max. value: dE*ab≤ 0.04
	(After whiteboard calibration, measure the whiteboard 30 times at 5-second intervals)
	Spectral reflectance:
	Standard deviation<0.08%
Inter-instrument Error	ΔE*ab≤0.25
	（BCRA Series Ⅱ, average measurement of 12 tiles）
Displayed Accuracy	0.01
Measurement Index	Reflectance,
	CIE-Lab,CIE-LCh,HunterLab,CIE-Luv,XYZ,Yxy,RGB,Color difference(ΔE*ab,ΔE*cmc,ΔE*94,ΔE*00),WI(ASTM
	E313-00,ASTM E313-73,CIE/ISO,AATCC,Hunter,TaubeBergerStensby),YI((ASTM D1925,ASTM E313-00,ASTM
	E313-73),Blackness（My,dM）,Color Fastness, Tint(ASTM E313-00),Color Density CMYK(A,T,E,M),Metamerism index
	Milm,Munsell, Opacity, Color strength(Dye strength, tinting strength)
Illuminant	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,ID50,ID65,LED-B1,LED-B2
	LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V2
Camera Locating	With
Calibration	Auto
Software supporting	Android,IOS,WeChat applet，Windows
Observer Angle	2°, 10°
Integrating Sphere Size	ϕ40mm
Optical Splitting Method	Grating
Sensor	Dual array sensor
Wavelength Interval	10nm
Wavelength Range	400-700nm
Measured Reflectance Range	0-200%
Reflectance Resolution	0.01%
Test Time	＜2s
Interface	USB，Bluetooth
Screen	3.5-inch IPS full color screen
Battery	Rechargeable, 8000 times continuous tests, 3.7V/3000mAh
Illuminant Life Span	1 million measurements in 10 years
External Dimension (L*W*H)	95*129*231mm
Net Weight	0.75kg

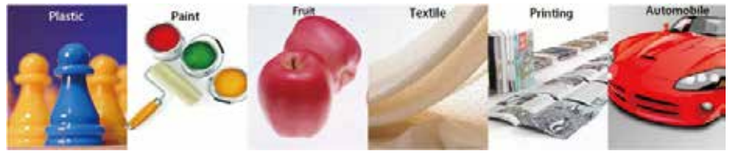
Portable Grating Spectrophotometer

SP-CLR500C



Application

Portable Grating Spectrophotometer has powerful performance configuration which makes color measurement more professional. Excellent inter-instrument error ensures consistency of the measurement data of multiple devices.



Features

20 kinds of color indexes and 26 kinds of illuminants
Supports 26 kinds of illuminants such as D65/D50,etc.
It can get the value of reflectance, CIE-Lab,-CIE-LCh, whiteness, yellowness, opacity, color strength and other color indexes.

Excellent inter-instrument error
Inter-instrument error＜0.3 ,which ensures test results consistency of multiple devices.

Auto calibration
The auto calibration technology allows the instrument to achieve automatic calibration, which greatly improves the user experience.

Multi-function calibration base
The multi-function calibration base keeps the whiteboard being protected, combining calibration and charging functions in one. When instrument is placed on the base, it will be automatically charged and calibrated. It saves a lot of time for the user to charge and calibration the device.

Specifications

Model	SP-CLR500C
Optical Geometry	D/8 (diffused illumination,8° viewing), SCI（specular component included）
Integrating Sphere Size	ϕ40mm
Light Source	Full waveband balanced LED
Color Space and Index	Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB, Color difference(ΔE*ab, ΔE*cmc, ΔE*94,ΔE*00),WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Blackness（My,dM）,Color Fastness, Tint,(ASTM E313-00),Color Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Color strength
Illuminant	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
Observer Angle	2°,10°
Sensor	256 pixel CMOS sensor
Calibration	Auto
Wavelength Interval	10nm
Wavelength Range	400-700nm
Measured Reflectance Range	0-200%
Reflectance Resolution	0.01%
Repeatability	Chromaticity value: Max. :dE*ab< 0.1 Average :dE*ab< 0.05 Standard deviation within ΔE*ab 0.03 (When a whiteboard measures 30 times every 5 seconds) Reflectance: Standard deviation < 0.1%
Measuring Aperture	MAV: ϕ8mm/ ϕ11mm
Inter-instrument Error	ΔE*ab＜0.3
Measuring Time	（BCRA Series Ⅱ, average measurement of 12 tiles，MAV/SCI）
Battery	About 2s
Screen	Rechargeable, 8000 times continuous tests, 3.7V/3000mAh
Interface	2.4-inch IPS full color screen
Illuminant Life Span	USB，Bluetooth
Software Support	1 million measurements in 10 years
Camera	Android, IOS, Windows
External Dimension	Without
(L*W*H)	77.8*53.2*185.7mm
N.W./G.W.	0.3kg/1.5kg
Shipping Dimension (L*W*H)	320*170*290mm