

**From the laboratory to the production line,
color reproduction is impeccable,
and quality control is in place in one step.**



Fast measuring



Full Spectrum



Dual channel sensing



High-precision 0.01



PS220 SpectroColorimeter

The PS220 has excellent repeatability and inter platform variability, with continuous and stable measurement data that is accurate and reliable. Coupled with a comfortable and rounded appearance, it is even more irresistible. It comes with quality management software that supports Android, iOS, Windows, HarmonyOS systems, WeChat mini programs, color cloud, etc., making it convenient for quality monitoring and data management.

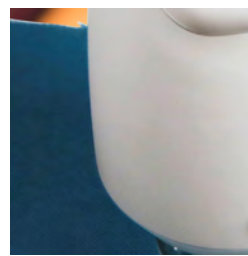
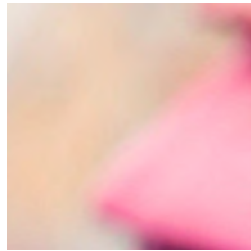
Feature

(1) Optical Design and Measurement Capability

Lighting observation structure: Adopting internationally recognized D/8 lighting observation conditions, supporting SCI (including specular reflection) measurement mode, complying with multiple domestic and international standards such as CIE No.15 and GB/T 3978, ensuring the authority and universality of measurement results.

Dual path design: equipped with dual path CMOS coated spectral sensors, combined with a Φ 40mm integrating sphere, to improve data processing efficiency and accuracy.

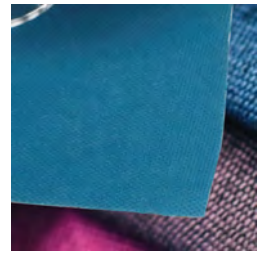
Full band LED light source: 400-700nm full spectrum acquisition, with sufficient visible light range for spectral distribution, avoiding spectral loss of white LED in specific bands and ensuring measurement accuracy.



(2) Accuracy and stability of data

Repeatability: The standard deviation of chromaticity values ΔE^*_{ab} is ≤ 0.02 , indicating strong consistency in measurement data results.

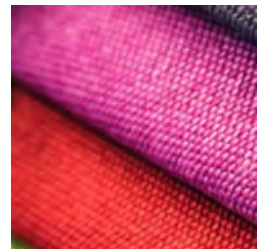
Inter station difference: $\Delta E^*_{ab} \leq 0.3$, with small differences in measurement results between different instruments, suitable for collaborative control of multiple instruments.



(3) Operational experience and functional adaptation

Human computer interaction: Equipped with a 2.8-inch TFT true color capacitive touch screen, supporting single machine one click measurement, the interface intuitively displays spectra, chromaticity values, color difference values, qualification judgment results, and color simulation bias, simplifying the operation process.

Multi terminal collaboration: Supports USB, Bluetooth 5.0 connection to computers, mobile phones (compatible with multiple systems), and WeChat mini programs to achieve data synchronization, report generation, and cloud storage (200 standard samples and 10000 samples). Create your personal color database in the cloud using apps and mini programs, without carrying heavy color cards, and share it with partners anytime, anywhere.



(4) Multi color measurement space and light source

Color Space and Formulas: Supports multiple color spaces such as CIE LAB, XYZ, HunterLab, as well as mainstream color difference formulas such as ΔE_{ab} , ΔE_{cmc} , and ΔE^*_{00} . It can measure multiple chromaticity indicators such as spectral reflectance, whiteness (WI), yellowness (YI), heterochromatic index Mt, and color fastness. Some functions, such as Munsell color codes and CMYK, are implemented through a mobile app.

Observation light source: Built in 30+types of light sources (such as D65, A, C, D50, etc., some of which can be extended through the APP) to meet the color evaluation needs under different lighting conditions.

(5) Hardware design and scene adaptation

Ergonomic design and easy to measure device: It has a beautiful and smooth appearance and comfortable grip, with a structural design that conforms to human mechanics. It fits snugly in the palm and is suitable for continuous detection work. Equipped with an automatic measurement and easy to measure device, it is portable, fast, easy to measure and use.

Flexible Measurement Caliber: We offer four measurement calibers: 8mm/10mm (platform+nozzle) and 4mm/5mm (platform+nozzle), which are suitable for samples of different sizes (such as conventional industrial parts, small electronic components, curved ink coatings, etc.), and are equipped with stabilizing plates for positioning verification to ensure accurate measurement positions.

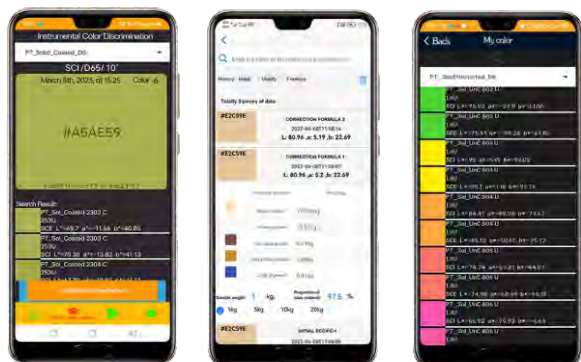
Built in high-definition camera for clear observation of the tested area: The built-in camera is used for framing and positioning, and through real-time framing, it can accurately determine whether the measured part of the object is the center of the target, improving measurement efficiency and accuracy.



Support connected mobile phone measurement

Support Android, IOS, Windows, wechat program, HarmonyOS

1. Color difference measurement, color simulation is more intuitive;
2. Find the closest color, and view the details Lab value, spectrum, etc.;
3. Can create personal color database, input printing, coating, textile and other color card information; Mass storage of quantity;
4. Sewing color matching, provide color scheme.



Support PC software measurement

Connected devices can be expanded for more functions

The upper computer software SQCX can connect the spectrophotometer through USB cable and Bluetooth, control the instrument for measurement, change the instrument configuration, and operate the instrument data. At the same time, it also greatly expanded the function of the instrument, to achieve complex data management, color detection, report generation, etc., is the right-hand assistant of color quality management.



Analysis and management

By connecting SQCX software on PC, the instrument can analyze, copy, delete, modify, name and save the measured data.



Mass storage

The measured data report can be uploaded to the cloud storage. Achieve mass data storage.



Data printing

Compare color differences, generate test reports, and print out the data by connecting to a Bluetooth printer.



Share and pass

The generated test report can be shared and transmitted through a connected computer. Fast exchange of color information to speed up production time.

Optional accessories

The instrument comes with 2 optional accessories; Such as micro printer, powder test box; Meet more measurement needs.

Microprinter

Easy to carry, without computer can be continuously printed out the measurement of various parameters, easy to save.



Powder test box

Easy to use, focused on powdered target measurement.



APPLICATION FIELD



Printing ink



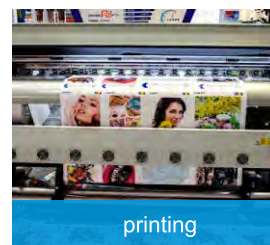
Textile printing and dyeing



ceramic



plastic



printing

SPECIFICATIONS

Model	PS220 spectrophotometer
Optical Geometry	D/8(diffused illumination, 8-degree viewing angle), SCI (specular component included component excluded) Mode, Comply to CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164, DIN5033 Teil7
Characteristic	Adopt CMOS dual beam splitting sensor; Used for color difference quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other
Light Source	Combined full spectrum LED light source
Integrating Sphere Size	Φ40mm
Sensor	CMOS dual beam splitting sensor
Wavelength Range	400-700nm
Measuring Aperture	MAV:Φ8mm/Φ10mm(Plat+Sharp Caliber);SAV:Φ4mm/Φ5mm(Plat+Sharp Caliber)
Specular Component	SCI
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,HunterLab,βxy,DIN Lab99
Color Difference	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00, DINΔE99,ΔE(Hunter)
Other Colorimetric Index	Spectral reflectance, WI(ASTM E313, CIE/ISO,AATCC,Hunter), YI(ASTM D1925, ASTM 313), Same color spectral index Mt, color fastness, color fastness, strength, coverage, 555 color tone classification, Munsell (C/2) (implemented on mobile app) CMYK
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), U35,NBF,ID50,ID65,LED-1,LED-2,LED-3,LED-4,LED-5,LED-6,LED-7,LED-8,LED-9,LED-10 (Partially implemented through mobile apps)
Display	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Simulation, Color Offset
Measuring Time	About 1s
Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.02 (After preheating and correction,the average value of the whiteboard was measured for 30 times at an interval of 5s);Spectral reflectance: MAV/SCI, Standard deviation within 0.08% (400nm to 700nm: within 0.18%)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.3 (Average for 12 BCRA Series II color tiles)
Displayed Accuracy	0.01
Measured Reflectance Range	0-200%
Reflectance Resolution	0.01%
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Stable film positioning+camera framing positioning
White Calibration mode	Contact type calibration
Dimension	94X68X188mm
Weight	About 410g
Battery	Lithium battery,3.7V,3200mAh,8000 cycles in 8 hours
Illuminant Life Span	More than 1.2 million measurements over 10 years
Screen	2.8 inch TFT true color, Capacitive Touch Screen
Interface	USB ,Bluetooth
Data Storage	Standard 200Pcs, Sample 10000Pcs(One data is able to include SCI/SCE);APP/PC mass storage
Software support	Andriod,iOS,Windows, WeChat Mini Program, HarmonyOS
Language	Simplified Chinese, English, Traditional Chinese
Operating Environment	0~40°C, 0~85%RH (no condensing),Altitude < 2000m
Storage Environment	-20~50°C, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, USB Cable, User Guide, SQCX PC Software(Download from office website), White and Black Calibration Cavity, Protective Cover, Wrist strap, Aperture
Optional Accessory	USB Micro Printer, Powder Test Box

GUANGDONG THREENH TECHNOLOGY CO., LTD.



Spectrophotometers



Colorimeters



Haze Meters



Gloss Meters



Test Charts



Light Booths

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