Guangdong Threenh Technology Co., ltd.

Let every color judgment be backed by data.

Authoritative data, applicable to both fluorescent and regular samples.



PS410 Spectrophotometer

The PS410 is a mid-range spectrophotometer that balances flexibility and practicality. Featuring six apertures and multiple configurations to accommodate samples of different sizes, it is equipped with SCI/SCE dual measurement technology to reduce interference from surface texture. Widely used in industries such as plastics, electronics, printing, and ceramics for batch quality control.

ISO9001 CE RoHS

Own the core tech: Top performance, budget price.

LOOK BEYOND THE SURFACE TO REVEAL THE TRUE ESSENCE OF COLOR.

With a single press, the PS410 simultaneously captures both Specular Component Included (SCI) and Specular Component Excluded (SCE) data, effectively eliminating interference from sample surface texture. This ensures more objective and authentic color evaluation.

01

SCI/SCE Synthesis Technology

Supports separate measurements of SCI and SCE, and enables simultaneous rapid measurement of both (approx. 1 second). Reduces interference from surface texture and objectively captures the true color.

02

Full-Spectrum LED Light Source

Uniform spectral distribution across the 400—700nm wavelength range, eliminating spectral gaps and enhancing measurement reliability.

03

High-Performance Hardware Configuration

Dual-array silicon photodiode sensor (dual-row, 18 groups) and a 40mm large integrating sphere, combined with nano-integrated optical dispersion components, ensure more precise color capture and processing.



04 Dual-Optical Path System + Proprietary Algorithm

The dual-optical path system offers strong anti-interference capability for more accurate color measurement, with repeatability ΔEab ⩽ 0.025 and instrument-to-instrument variation ΔEab ⩽ 0.4, ensuring multi-device data consistency. Ideal for color formulation and precise color communication.

05 Full-Scenario Adaptability with Six Apertures for Diverse Samples

Equipped with six apertures in dual modes (flat platform and nozzle tip) covering 3/6/11mm, it flexibly accommodates samples of various sizes—from tiny to standard—and different shapes.



EFFICIENT OPERATION: INTELLIGENT DESIGN, LOWERING THE BARRIER TO USE

Stabilizer Plate Positioning & Verification

Precisely locks the measurement area, avoiding deviation caused by sample shape.



Real-Time Camera View

Visually confirm if the measured spot is at the target center. Combined with the stabilizer plate, this dual-assurance system significantly boosts batch inspection efficiency.



Contact-Based Auto-Calibration

The smart calibration base requires no frequent manual intervention. The instrument auto-verifies to maintain optimal measurement status.



Intelligent Color Chart Matching

Supports quick matching of color card codes, saving manual color searching time and thus improving production efficiency in color verification.



SCALABLE MANAGEMENT : FULL-SPECTRUM DATA + MULTI-PLATFORM CONNECTIVITY TO MEET ENTERPRISE NEEDS.

Comprehensive Colorimetric Metrics: Supports over 30 illuminants and 40 measurement indices, delivering full-spectrum results including spectral graphs/data, colorimetric values, color difference values/graphs, and color simulations to meet diverse industry needs.

High-Capacity Reference Storage: Capable of storing 500 reference standards, supporting enterprises in scalable data accumulation.

Multi-Platform Connectivity & Data Management: Compatible with USB and Bluetooth interfaces, and supports Android, iOS, Windows, WeChat Mini Programs, HarmonyOS, and other platforms. Enables rapid data transfer, sharing, and remote management for streamlined quality traceability and statistical analysis.



HarmonyOS

OPTIONAL ACCESSORIES

Product Name	Material Code	Image	Function
Powder Test Box	2.006.01.0011		Easy to use, designed specifically for measuring powdered targets.
Mini Printer	1.609.01.0020		Portable and convenient, capable of continuous printing without connecting to a computer. All measured parameters are easy to store.

PRODUCT SPECIFICATIONS

Product Model	PS410
Optical Geometry	D/8 (Diffuse Illumination, 8° Directional Reception), SCI (Specular Component Included)
Meet The Criteria	Conforms to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO 7724–1, ASTM E1164, DIN 5033 Teil 7.
Features	Applications: Used for color quality control in industries such as plastics & electronics, paints & coatings, textiles & apparel printing/dyeing, and ceramics. Portable and equipped with built–in electronic color cards, it supports functional expansions via a mobile app for color card lookup and multiple operations.
Integrating Sphere Size	Φ40mm
Light Source	Combined full spectrum LED light source
Spectrophotometric Mode	Nano–integrated Spectral Device
Sensor	Large–area silicon photodiode array (double–row 18 group)
Wavelength Range	400~700nm
Wavelength Interval	10nm
Measurement range	0~200%
Measuring Aperture	Six apertures: 3mm platform + 3mm nozzle tip + 6mm platform + 6mm nozzle tip + 11mm platform + 11mm nozzle tip
Locating Method	Stabilizer plate positioning + camera viewfinder positioning
Calibration	Contacted White Tile Calibration
Specular Component	SCI/SCE
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,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,DINΔE99,ΔE(Hunter)
Measurement Indicators	Spectral Reflectance Factor, WI (ASTM E313, CIE/ISO, AATCC, Hunter, Taube, Berger, Stensby), YI (ASTM D1925, ASTM 313), Metamerism Index, Staining Fastness, Color Change Fastness, Strength, Hiding Power, 555 Hue Classification, Munsell (C/2), Blackness (My, dM), Color Density CMYK, Tint
Observer Angle	2°/10°
Illuminant	D65,A,B,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–B1,LED–B2,LED–B3,LED–B4,LED–B5,LED–BH1,LED–RGB1,LED–V1,LED–V2
Displayed Data	Spectral Graph/Data, Sample Chromaticity Values, Color Difference Value/Graph, Pass/Fail Results, Color Simulation, Color Deviation
Measuring Time	About 1s
Repeatability	Chromaticity Values (MAV/SCI): Standard deviation within ΔE*ab 0.025 (under conditions: after warm–up calibration, 30 consecutive measurements of a white tile at 5–second intervals). Spectral Reflectance (MAV/SCI): Standard deviation within 0.1% (within 0.2% across 400–700nm).
Inter–instrument Error	MAV/SCI: ΔE*ab within 0.4(Average of measurements from 12 BCRA Series II tiles)
Displayed Accuracy	0.01
Measurement Mode	Single Measurement, Average Measurement(2–99times)
Reflectance Resolution	0.01%
Size	120*75*207mm
Weight	367g (calibration base excluded)
Battery	Lithium battery,3.7V,3200mAh,8000 cycles in 8 hours
Illuminant Life Span	More than 1.2 million measurements over 10 years
Display	3.5 inch TFT true color, Capacitive Touch Screen
Data Port	USB,Bluetooth
Data Storage	Standard 500Pcs, Sample 10000Pcs(One data is able to include SCI/SCE); PC mass storage
Software Support	Andriod,IOS,Windows,Wechat small program, Hongmeng
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)
Accuracy Assurance	Guaranteed First–Class Measurement Qualification
Standard Accessory	Power adapter, data cable, user manual, quality management software (download from official website), calibration box, protective cover, wrist strap, measurement apertures.
Optional Accessory	Micro Printer, Powder Test Box