

## Model: PS2080

Conform to the standard:

CIE No.15,GB/T 3978,GB 2893,  
GB/T 18833,1S07724-1,  
ASTM E1164,DIN5033 Teil7



Portable design, sturdy construction  
Anti-shaking, dustproof and knock

## Product Features

D/8 geometric optical structure,  
Suitable for a variety of measurement conditions

Full spectrum with high life and  
low power consumption  
The combined LED light source,  
UV support fluorescence measurement

Dual optical path system  
The SCI and SCE spectra of samples can be  
measured simultaneously

2°/10° standard observer Angle,  
Multiple light source mode,  
multiple color space  
A variety of chroma parameters

Imported white board is  
not easy to dirty, Ensure  
measurement accuracy



PS2080 Six apertures:

MAV:  $\phi$ 8mm/ $\phi$ 10mm(Flat+ Tip);

SAV:  $\phi$ 4mm/ $\phi$ 5mm(Flat+ Tip);

SSAV: 1x3mm(Flat+ Tip);



4mm Flat



4mm Tip



8mm Flat



8mm Tip



1x3mm Flat



1x3mm Tip

# PS2080 Spectrocolorimeter



## Powerful

- Suitable for color difference quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries
- Support the spectral reflectance, WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), the same color spectrum index of Mt, touch color fastness, color fastness, strength, cover degree, 555 color classification, Munsell(C/2) (mobile APP implementation)

## Durable

- Light weight, impact resistance, dirt resistance and storage resistance
- Operating temperature range 0~40°C, 0~85%RH(no condensation), Altitude: below 2000m
- Storage temperature range -20~50 °C, 0~85%RH(no condensation)

## Efficient

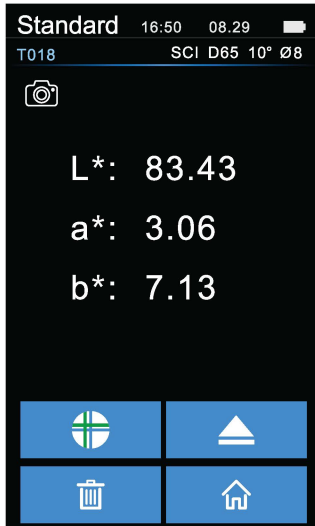
- Ideal for laboratory and factory use
- Support USB cable computer transfer data
- The measurement is fast and accurate, and it only takes 1S to measure SCI and SCE simultaneously
- Color display, touch control, easy to operate

## Accurate

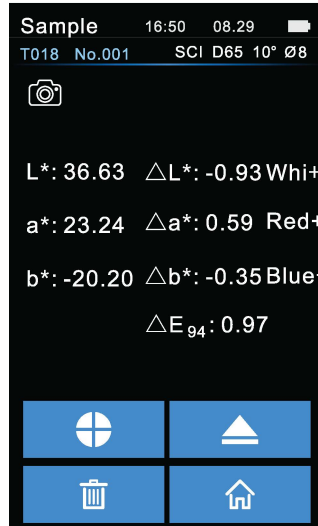
- Measurement accuracy 0.01
- The standard deviation of repeatability was within 0.02 of  $t, E^*ab$
- Support multiple national and international standard measurement
- A variety of different caliber algorithms



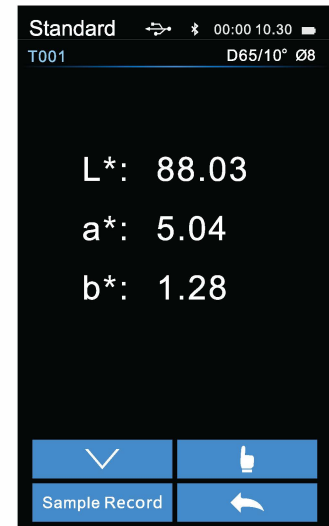
# PS2080 Spectrocolorimeter Main Functions



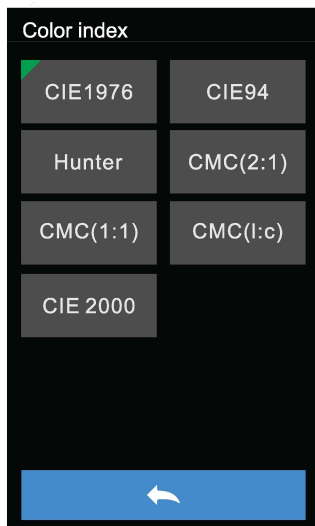
Standard Measure



Sample measurement and color difference



View Measurement record



Color index selection



Illumination setting



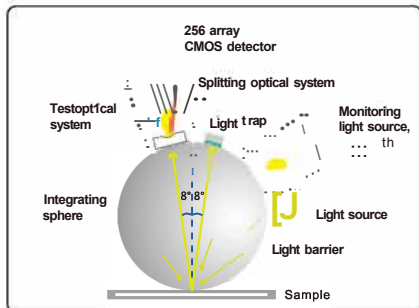
Color space selection



## Powder test kit for colorimeter (purchased separately)

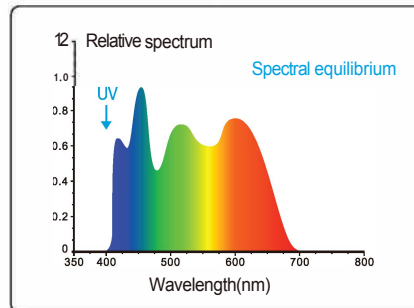
Powder test box has the characteristics of easy cleaning, no light overflow, suitable for All kinds of powder, small particle measurement, avoid contaminating the sample at the same time it keeps the test bench clean.

# PS2080 Spectrocolorimeter Product Features



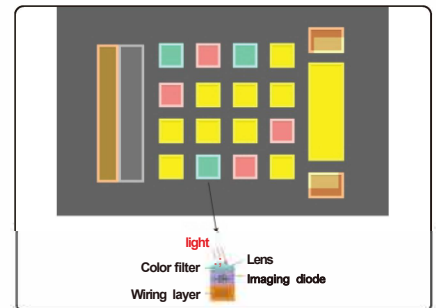
1. The international D/8 SCI/SCE synthesis technology was adopted

The spectrocolorimeter PS2080 adopts D/8 lighting observation conditions and SCI/SCE (including specular reflection/excluding specular reflection) synthesis technology with a wide range of international applications, which is applicable to all industries.



2. Balanced LED illuminant+UV

The 400-700nm full band balanced LED light source is used as the instrument lighting source, which has sufficient spectral distribution in the visible light range, avoiding the spectral loss of white LED in specific bands, and the fluorescent materials can also be easily measured.



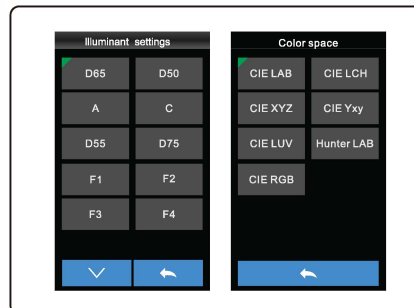
3. CMOS dual beam splitting sensor

High speed and high sensitivity CMOS dual beam splitter sensor makes color data processing more efficient and accurate.



4. Contact automatic whiteboard calibration

The spectrophotometer PS2080 is equipped with an intelligent calibration base. Contact automatic whiteboard calibration is available, professional standard Whiteboard reflectivity  $R_{bb} \geq 95\%$ , good surface uniformity, It has high stability and can obtain repeated and accurate data.



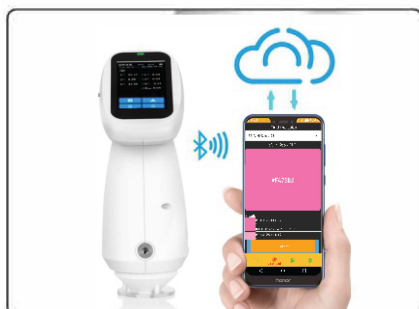
5. Multiple color measurement spaces, multiple illumination source

Support CIE LAB, XYZ, Yxy, LCh, CIE LUV, s-RGB, xy, DIN Lab99, Munsell(C/2) Color space and D65, A, C, D50, D55, D75, F1, F2(CWF), F3, F4, F5, F6, F7(DLF), F8, F9, F10(TPL5), F11(TL84), F12(TL83/U30) multiple illumination source, Meet different measurement requirements.



6. Ergonomic design and easy measurement

The fitted palm is suitable for continuous detection, which makes you fast and easy to use. An easy to measure device for automatic measurement is added, which is portable, fast, easy to measure and use.



7. Cloud storage, carrying massive color databases

Use apps and applets to establish your private color database in the cloud, without carrying heavy color cards, you can share them with partners anytime and anywhere.



8. The camera can clearly observe the measured area

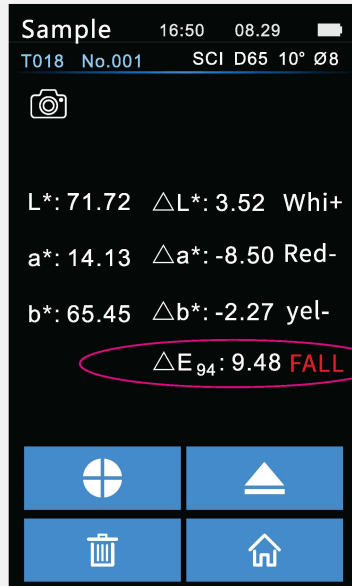
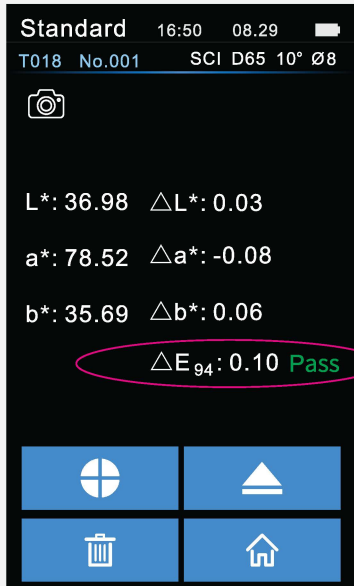
The built-in camera is used for view taking and positioning. Through real-time view taking, it can accurately determine whether the measured part of the object is the target center, which improves the measurement efficiency and accuracy.



9. Color management software

Quality management software Android, IOS, Windows, WeChat app and Hongmeng system are applicable to quality monitoring and color data management in various industries. Data the user's color management, compare color differences, and generate test reports.

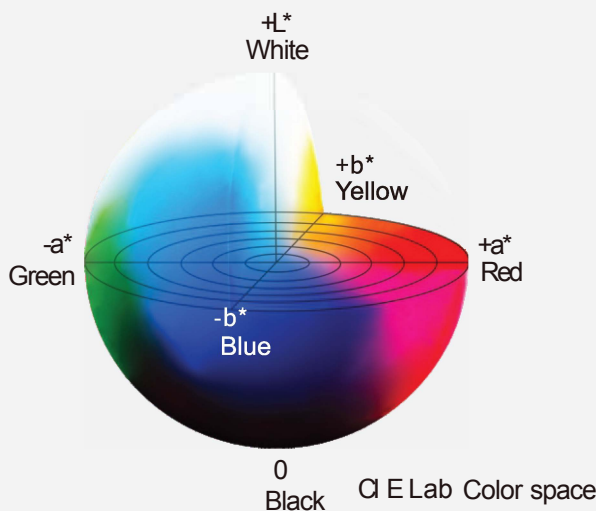
# PS2080 Spectrocolorimeter Result Evaluation



Under the ISO7724-1 and ASTM E1164 standards, the color values of the standard sample and sample obtained under the light source are set, and the system conducts rigorous formula calculation to obtain the color difference value and color tendency. Within the set tolerance range, the system will display "qualified"; when it exceeds the set range, the system will display "unqualified".

The difference of color difference is distinguished by NBS unit, which is derived based on the unit of color difference calculation formula established by Judd Hunter. When the value of NBS unit is larger, the color difference is more obvious, and vice versa.

NBS	Level
0.00-0.50	trace
0.50-1.50	slight
1.5-3	noticeable
3-6	appreciable
6+	much



Color space CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,HunterLab,xy,DIN Lab99 choice,For example, common CIE Lab color space:

L \* means black and white. The larger the value of L \*, the higher the brightness;

A \* represents red and green, + a \* represents red, and - a \* represents green;

B \* represents yellow blue, + b \* represents yellow, and - b \* represents blue.

We can easily adjust the color through the color bias display.

\*The above test results have been corrected in black and white after startup, and are within the validity period of correction.

# PS2080 Spectrocolorimeter SQCX

Connect devices for powerful function expansion  
Create instant reports using SQCX

SQCX can connect the spectrophotometer through USB cable and Bluetooth (only for instruments supporting Bluetooth), control the instrument to measure, change the instrument configuration, and operate the instrument data. At the same time, it also greatly expands the functions of the instrument, supports a variety of surface color systems, light sources, more complex data management, color detection, report generation, etc., and is a powerful assistant for color quality management.



## SQCA

### Connect

Via Bluetooth® Connect the instrument to the mobile phone to see the real-time readings directly, and save them to the historical record.

### Review

Visually view historical measurement records for easy comparison.

### Management and printing

You can copy, delete and upload data to the cloud, or print the data by connecting to a Bluetooth printer.

### Rename and change

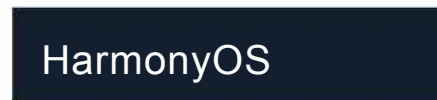
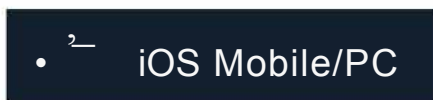
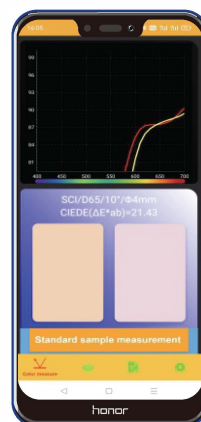
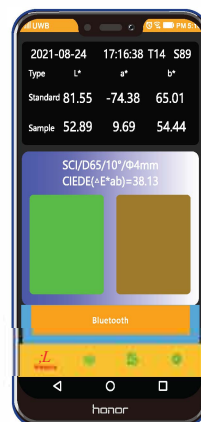
You can name data records to facilitate data modification while recording.

### Color check and color formula

The APP is built with massive color data. Through the analysis of measured colors, the software automatically finds similar color differences and obtains color formulas.

### Transmission

From the mobile device email detection data to the computer for further analysis, and through the cloud report or transmission of data.



# Parameter

Model	PS2080	PS2070
Optical Geometry	D/8 (diffuse lighting, receiving at 8° direction), SCI/SCE (including specular light/removing specular light)	
Standards Compliant	CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7	
Illumination source	Combined full spectrum LED & UV light source	
Integrating Sphere Size	Φ40mm	
Sensor	CMOS dual beam splitting sensor	
Spectral Range	400~700nm	
Measurement Aperture	Six aperture:MAV:Φ>8mm/Φ>10mm(Flat+Tip); SAV:Φ>4mm/Φ>5mm(Flat+Tip); SSAV: 1x3mm(Flat+Tip);	Four aperture: MAV:Φ>8mm/Φ>10mm(Flat+Tip); SAV:Φ>4mm/Φ>5mm(Flat+Tip);
Specular Component	SCI/SCE	
Color Spaces	CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,Hunterlab, xy,DIN Lab99	
Color Difference Formula	$\Delta E^*ab, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(l:1), \Delta E^*00, \Delta Nt, E99, t, E(Hunter)$	
Other Colorimetric Index	Reflectivity, WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), metamerism index Mt, color fastness, color fastness, strength, hiding degree, 555 tone classification, Munsell (C/2) (realized by mobile phone APP)	
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,1D50,1D65	
Displayed Data	Spectrogram/data, sample chromaticity value, chromatic aberration value/graph, Pass/Reject result, color simulation, color bias	
Measurement Time	About 1s	
Repeatability	Chromaticity value: MAV/SCI, standard deviation value $\Delta E^*ab$ within 0.02 (after preheating correction, the average value of the whiteboard is measured for 30 times at an interval of 5s) Spectral reflectance: MAV/SCI, standard deviation within 0.08% (400-700nm: within 0.18%)	
Inter-instrument agreement	MAV/SCI, $\Delta E^*ab$ 0.2 within{BCRA series 1112 color plate measurement average}	
Display accuracy	0.01	
Reflectivity range	0~200%	
Reflectivity accuracy	0.01%	
Measurement Mode	Single Measurement,Average Measurement(2-99times)	
Locating Method	Stabilizer positioning+camera view positioning	
Whiteboard verification method	Non contact automatic whiteboard calibration	
Locating Method	Length X width X height =94X68X188mm	
Weight	270g (without calibration base)	
Battery	Lithium battery, 3.7V, 3200mAh, 8000 times in 8 hours	
Life Lamp	1.2 million measurements in 10 years	
Screen	TFT true color 2.8inch, capacitive touch screen	
Interface	USB, Bluetooth	
Data storage	500 records for standard sample and 10000 records for sample,supporting APP/PC storage	
Software support	Android, iOS, Windows, WeChat applet, Hongmeng	
Languages	Simplified Chinese, English.Traditional Chinese	
Standard Accessory	Power adapter, data cable, manual, quality management software (official website download), black and white correction box, protective cover, wrist strap, measuring caliber	
Optional Accessory	Micro printer, powder test box	



Spectrophotometers



Colorimeters



Haze Meters



Gloss Meters



Test Charts



Light Booths

