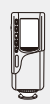
# Brand Colorimeter
# Extraordinarily Accurate

## Spectrophotometer ST50



Spectrophotometers


Colorimeters


Haze Meters


Gloss Meters


Test Charts


Light Booths

# Application

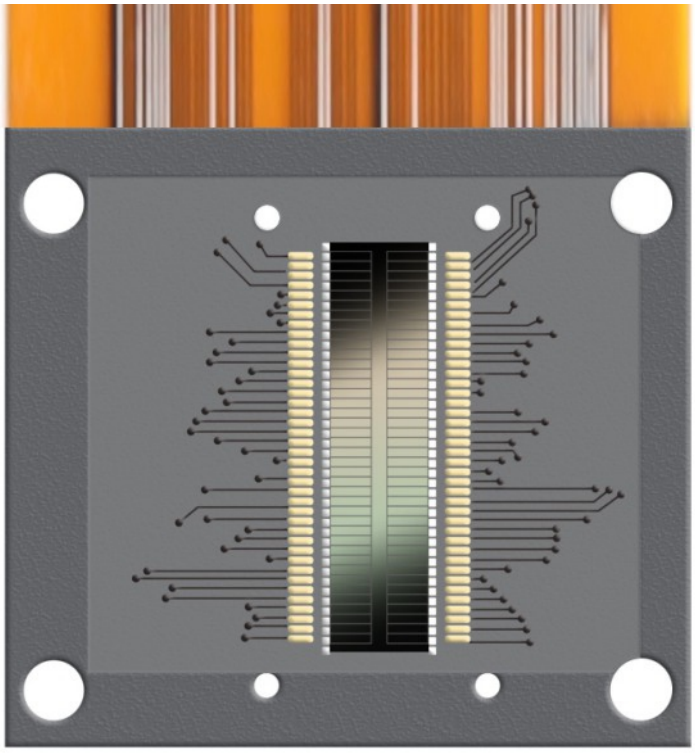
The spectrophotometer ST50 adopts a single customized measurement aperture, with accurate measurement data and stable performance. It is used for accurate color measurement and quality control in plastic electronics, paint ink, textile and garment printing, printing, ceramics and other industries.

Plastic Textile Paint Ceramics Print

# Features

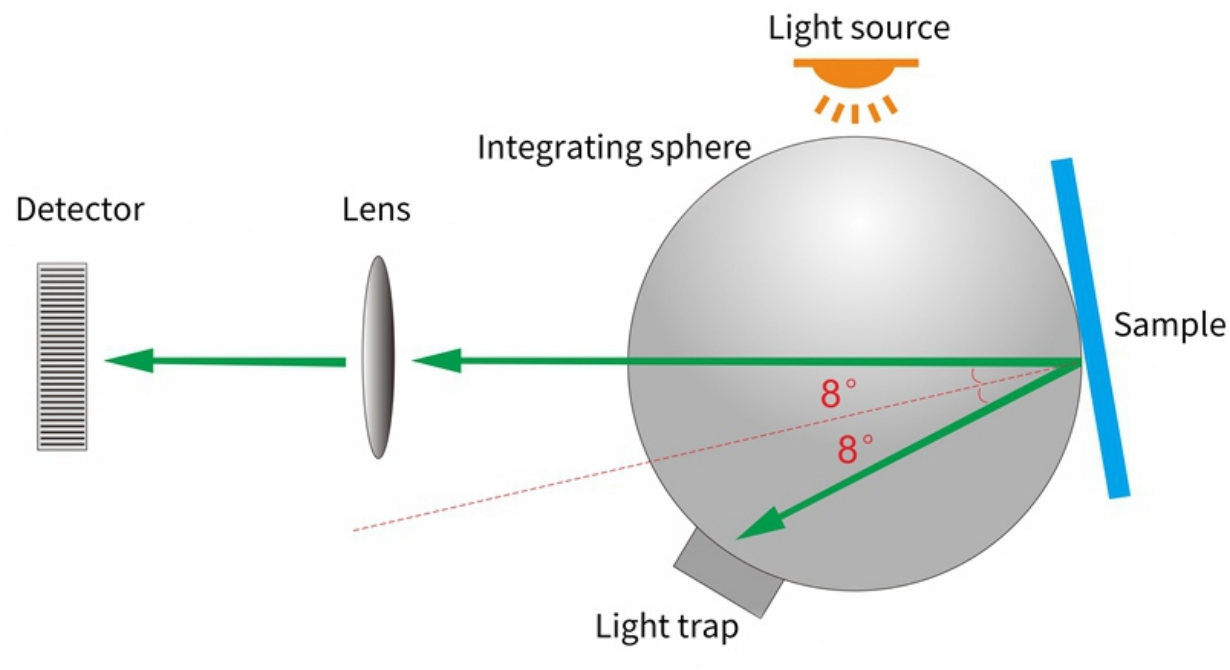
## 1. Large area photodiode array (20 groups of dual columns) sensors

Larger area double 20 array sensor, strong light will not be saturated, weak light sensitivity is higher and wider spectral response range, to ensure the instrument measurement speed, accuracy, stability and consistency, independent core technology, and international standards
The same platform is
fully compatible.



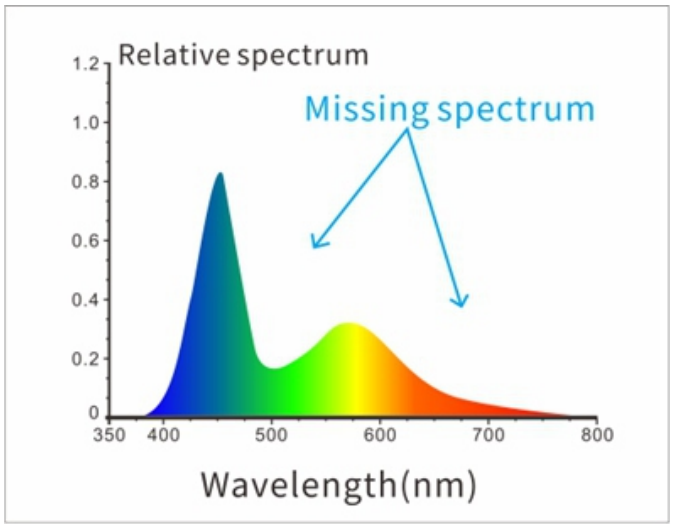
## 2. Adopt the international D/8 structure, support SCI+SCE simultaneous fast measurement

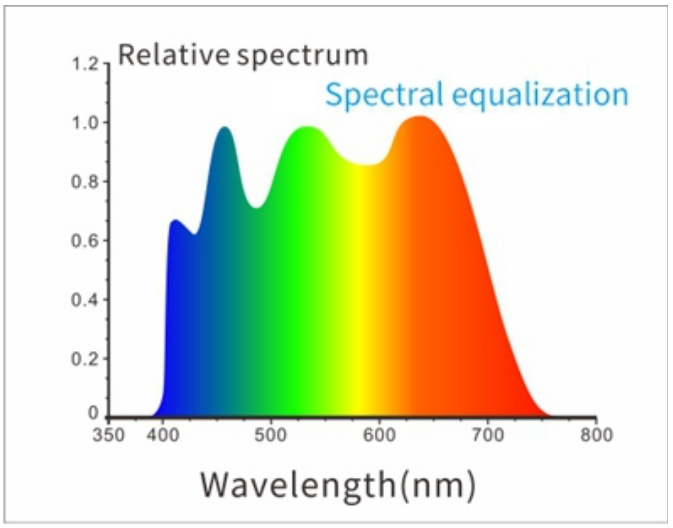
Spectrophotometer ST50 adopts D/8 illumination observation conditions and SCI/SCE (including specular reflection/exclusive specular reflection) synthesis technology, which is widely applicable in the world, and supports SCI+SCE simultaneous rapid measurement, and the test time is about 1.5 seconds.




## 3. Combined full spectrum LED light source and UV light source

The use of 400-700nm full-spectrum LED light source ensures sufficient spectral distribution in the visible light range, avoids the lack of spectrum in specific bands, strong light will not be saturated, weak light is more sensitive, and fluorescent samples can also be easily measured.



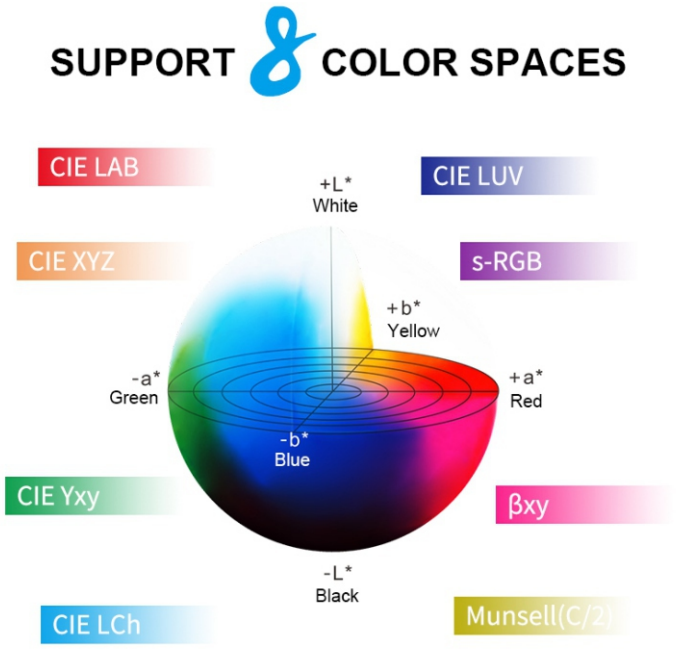
## 4. The camera framing and positioning can clearly observe the measured area

The spectrophotometer ST50 has a built-in camera for viewing and positioning. Through the real-time viewing of the camera, it can accurately determine whether the measured part of the object is the center of the target, which improves the measurement efficiency and accuracy.


## 5. Non-contact automatic calibration, professional imported whiteboard, more wear-resistant, dirt-resistant and stable.

## 6. Place the base with peace of mind to ensure that the whiteboard is not dirty


## 7. Provides 8 kinds of color measurement spaces and 41 kinds of observation light sources, and the light source can be customized (partly realized by the host computer/APP), which can meet the special measurement requirements under different measurement conditions.



## 8. Rich chromaticity indicators

In addition to the commonly used color measurement indicators, the spectrophotometer ST50 also provides spectral reflectance, WI (ASTME313, CIE/ISO, AATCC, Hunter, TaubeBergerStensby), YI (ASTMD1925, ASTM313), metamerism index Mt, staining Fastness, color fastness, strength (dye strength, tinting strength), opacity, 8 degrees gloss, 555 shade classification, blackness (My, dM), color density CMYK (A, T, E, M), Tint, color density, Munsell (some functions are realized by the host computer) chromaticity index.

## 9. Support Huawei Harmony OS, Android, IOS, Wechat applets, Windows programs



ISO 9001 Certified

## Product parameters

| | |
|---|---|
| Model | ST50 spectrophotometer |
| Optical Geometry | D/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 |
| Integrating Sphere Size | Φ40mm |
| Light Source | Combined full spectrum LED light source |
| Spectrophotometric Mode | Flat Grating |
| Sensor | Silicon photodiode array (double row 20 groups) |
| Wavelength Range | 400~700nm |
| Wavelength Interval | 10nm |
| Measured Reflectance | 0-200% |
| Measuring Aperture | One aperture: 8mm or 4mm optional |
| 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 | Spectral reflectance,WI(ASTM E313,CIE/ISO, AATCC, Hunter, TaubeBergerStensby),YI(ASTM D1925,ASTM 313), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity 8° Glossiness,555 tone classification, Carbon (My,dM), color density CMYK(A,T,E,M), Tint, Munsel chroma index (part of the function is realized |
| Observer Angle | 2°/10° |
| Illuminant | D65,A,C,D50,D55,D75,F1,F2(CWF),F3,F4,F5,F6,F7(DLF),F8,F9,F10(TPL5),F 11(TL84),F12(TL83/U30),B,U35,NBF, ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V2,LED-C2,LED-C3,LED-C5, able to customized light source (total 41 kinds of light source, Partially realize through the PC software /APP software) |
| Displayed Data | Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color simulation, Color Offset |
| Measuring Time | About 1.5s |
| Repeatability | Chromaticity value: MAV/SCI, within ΔE*ab 0.03 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration) |
| | Spectral reflectance: MAV/SCI, Standard deviation within 0.1% (400 nm to 700 nm: within 0.2%) |
| Inter-instrument Error | MAV/SCI, Within ΔE*ab 0.2 (Average for 12 BCRA Series II color tiles) |
| Display Resolution | 0.01 |
| Measurement Mode | Single Measurement, Average Measurement(2-99times) |
| Locating Method | Camera Locating,stabilizer cross position |
| Dimension | L*W*H=129X76X217mm |
| Weight | Approx 600g |
| Battery | Li-ion battery, 8800 measurements within 8 hours |
| Illuminant Life Span | 10 years, more than 1.5 million times measurements |
| Displayed Data | 3.5-inch TFT color LCD, Capacitive Touch Screen |
| Data Port | USB, Bluetooth ® |
| Data Storage | Standard 1000 Pcs, Sample 20000 Pcs, APP/PC mass storage |
| Software Support | Andriod,IOS,Windows,Harmony OS,Wechat applets |
| Language | Simplified Chinese, English, traditional Chinese |
| Standard Accessory | Power Adapter, USB cable, User Guide, PC Software(Download from office website), White and Black Calibration Cavity, Protective Cover, Wrist strap, Aperture (8mm or 4mm optional) |
| Optional Accessory | Micro Printer, Powder Test Box |