

# SPECTROPHOTOMETER

ISO 9001  
Certified

CE

SCM

TUV

RoHS

FC

# ST60



Spectrophotometers



Colorimeters



Haze Meters



Gloss Meters



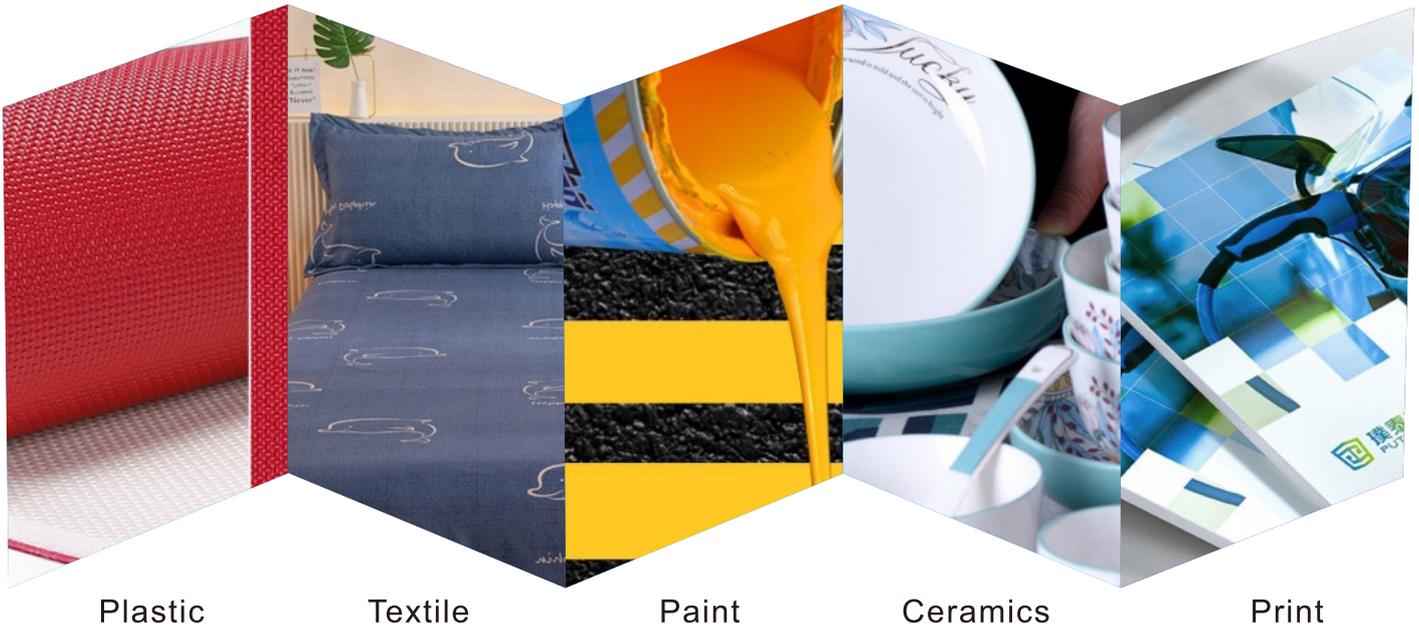
Test Charts



Light Booths

# Application

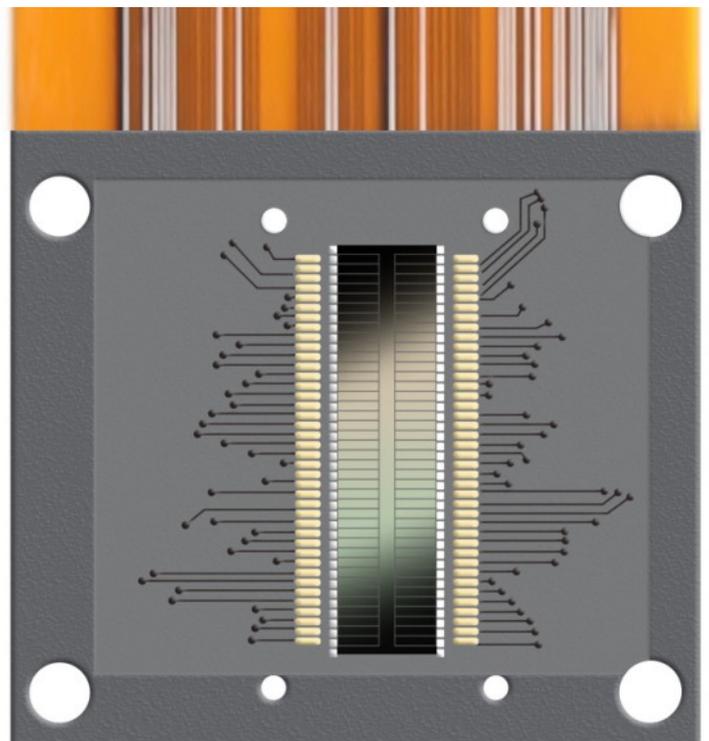
Cooltech spectrophotometer ST60 is equipped with 4 measuring apertures, which has wider adaptability, accurate color measurement and stable performance. measured on fluorescent samples.



# Features

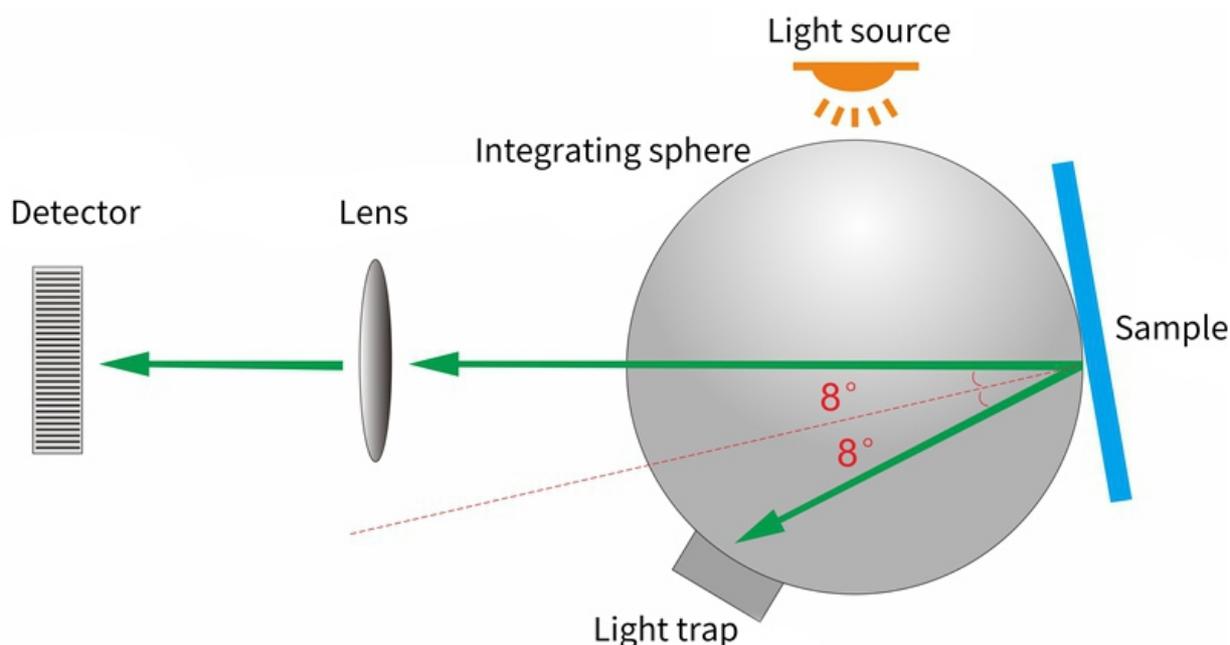
## 1. Large area photodiode array (26 groups of dual columns) sensors

Larger area double 26 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.



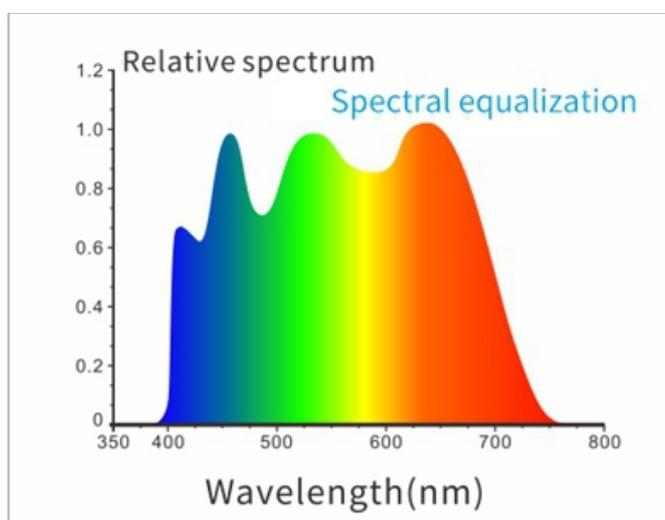
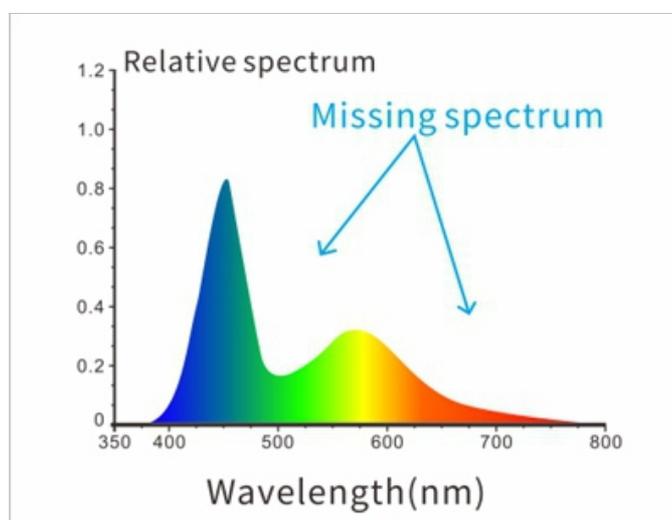
## 2. Adopt the international D/8 structure, support SCI+SCE simultaneous fast measurement

Spectrophotometer ST60 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 360-700nm 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. Equipped with four measuring calibers Large to meet sample measurement needs

Spectrophotometer ST60 comes standard with four measuring calibers:  $\Phi$  8mm platform diameter,  $\Phi$  8mm tip diameter,  $\Phi$  4mm platform diameter, and  $\Phi$  4mm tip diameter, which meets the measurement needs of most special samples.



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



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

The spectrophotometer ST60 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.



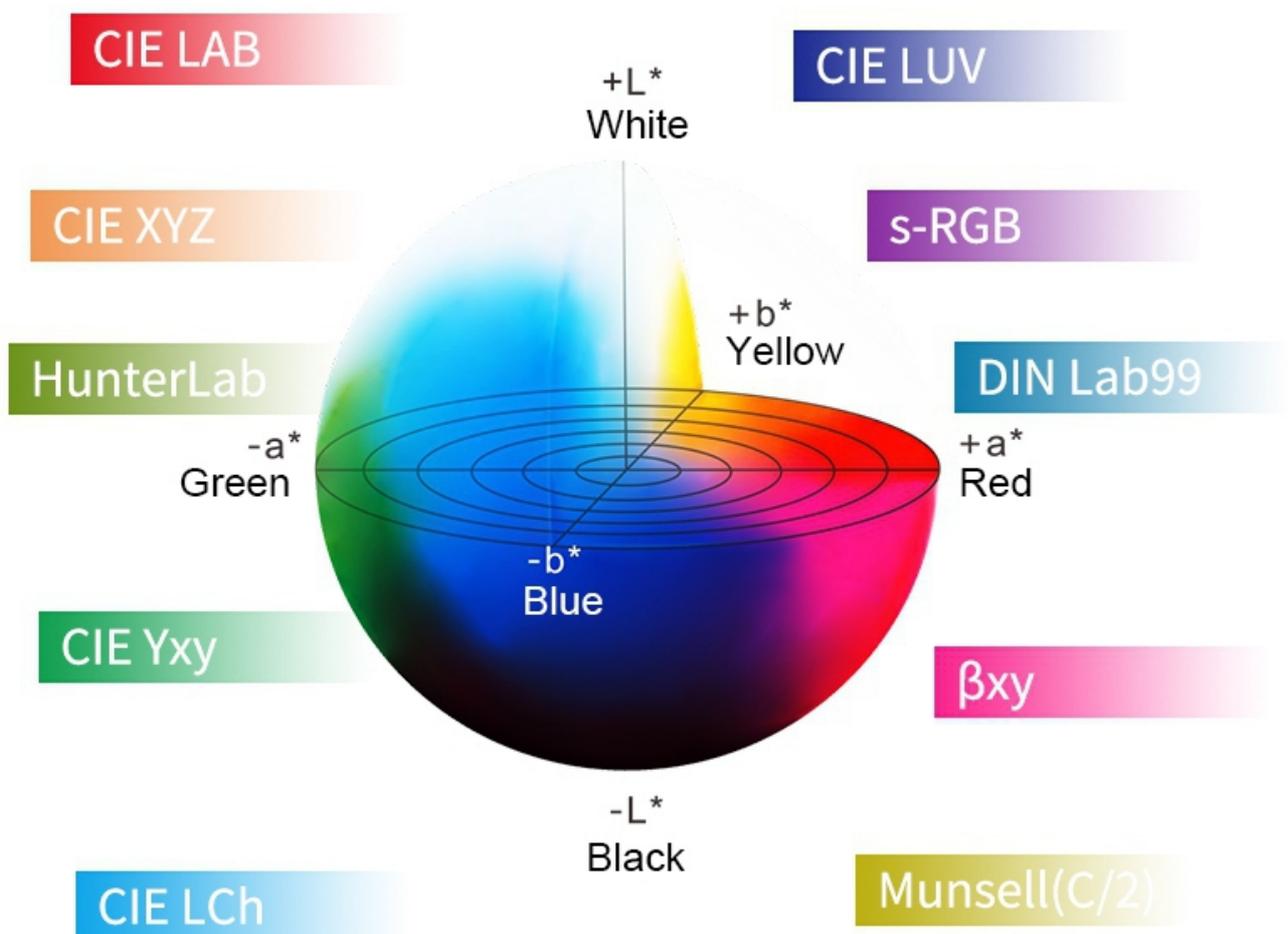
#### 7. Place the base with peace of mind to ensure that the whiteboard is not dirty



## 8. Provide 10 color measurement spaces and 41 observation light sources

Offer CIE LAB,XYZ,Yxy,LCh,CIE LUV, S-RGB, HunterLab,  $\beta$ xy, DIN Lab99, Munsell(C/2) color spaces, 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), 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. It also can be customized light source (A total of 41 kinds of light source, Partially realize through the PC software /APP software), and can meet the special measurement requirements under different measurement conditions.

# SUPPORT 10 COLOR SPACES



## 9. Rich chromaticity index

Spectrophotometer ST60 not only provides the commonly used color measurement, but also provide spectral reflectance, WI (ASTM E313, CIE/ISO, AATCC, Hunter, TaubeBergerStensby), YI (ASTM D1925, ASTM 313), Metamerism index of Mt, Staining Fastness, Color Fastness, Color Strength, Opacity, 8 degree gloss, 555 tone classification, Carbon (My,dM), color density CMYK(A,T,E,M), Tint, Munsel chroma index (part of the function is realized by PC software).

## 11. Support Huawei Hongmeng, Android, IOS, WeChat applet, Windows program.

## 10. Excellent instrument errors and repeatability

Ensure the consistency of measurement data of multiple devices, which can be used for color matching and accurate color transfer.



# Product parameters

Model	ST60 spectrophotometer
Optical Geometry	D/8 (diffused illumination, 8-degree viewing angle)SCI (specular component included)/SCE (specular component excluded) ; Include UV / excluded UV light sourceConforms to CIE No. 15, GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7
Characteristic	Adopt 3nh TS series core technology, 4 measuring apertures for accurate color analysis and transmission in laboratoryIt 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 26 groups)
Wavelength Range	360~700nm
Wavelength Interval	10nm
Measured Reflectance Range	0-200%
Measuring Aperture	4 apertures: 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	$\Delta E^*ab, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00, \text{DIN}\Delta E99, \Delta E(\text{Hunter})$
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 by PC software)
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),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 $\Delta E^*ab$ 0.025 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration)Spectral reflectance: MAV/SCI, Standard deviation within 0.08% (400 nm to 700 nm: within 0.18%)
Inter-instrument Error	MAV/SCI, Within $\Delta E^*ab$ 0.15 (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 30000 Pcs, APP/PC mass storage
Software Support	Andriod,IOS,Windows,Harmony OS,Wechat applets
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, PC Software(Download from office website), 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.