Benchtop Spectrophotometer TS8296

Grating is more accurate

7in color touch screen

USB/Bluetooth

360-780nm Full spectrum

Camera framing positioning

Used in plastic electronics, paint ink, textile and garment printing and dyeing, printing and other industries reflective samples,
Color transfer and quality control aspects of transparent samples.

1.Instrument display

▲ Front

▲ Back

▲ Left side

▲ Right side

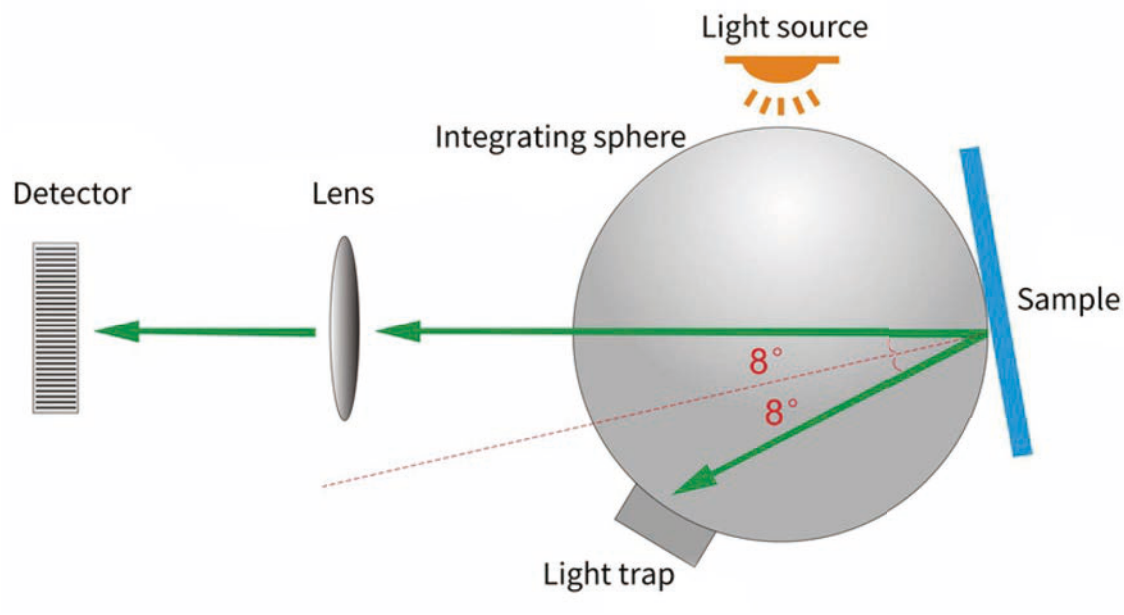
2. Introduction to the instrument

The desktop spectrophotometer TS8296 is a spectrophotometer developed by using the independent spectroscopic core technology. The dual-array CMOS image sensor has high sensitivity and wide spectral response range, and the test is more accurate. The repeatability ΔE*ab controlled within 0.01, and the inter-stage difference ΔE*ab is controlled within 0.12. The data is stable and reliable, and can be used for accurate color analysis and transmission in the laboratory.

3.Instrument Features

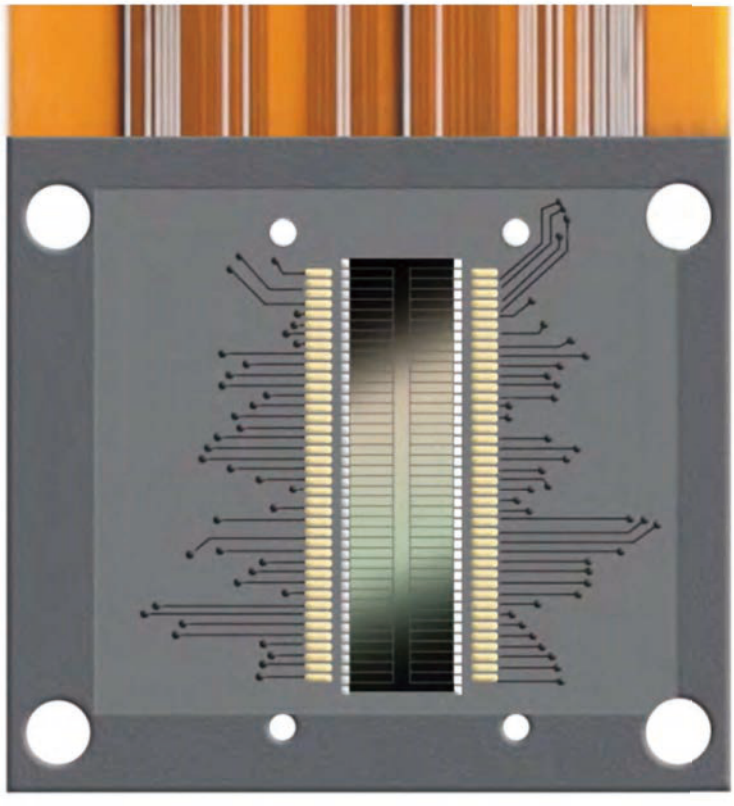
1. Internationally used D/8 structure, support SCI+SCE simultaneous fast measurement

The TS8296 desktop spectrophotometer 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.



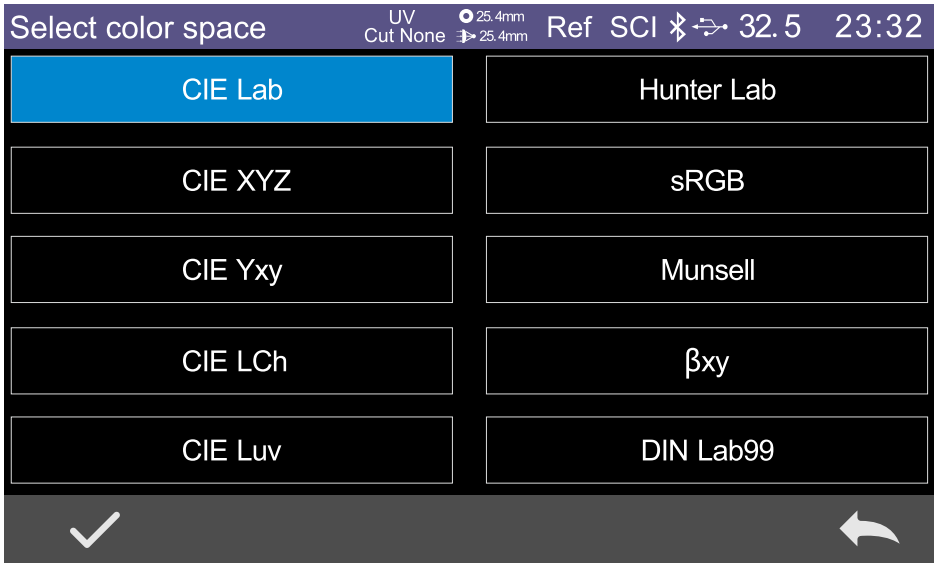
2. Dual-array CMOS image sensor

It has high sensitivity and wide spectral response range, which ensures the measurement speed, accuracy, stability and consistency of the instrument.



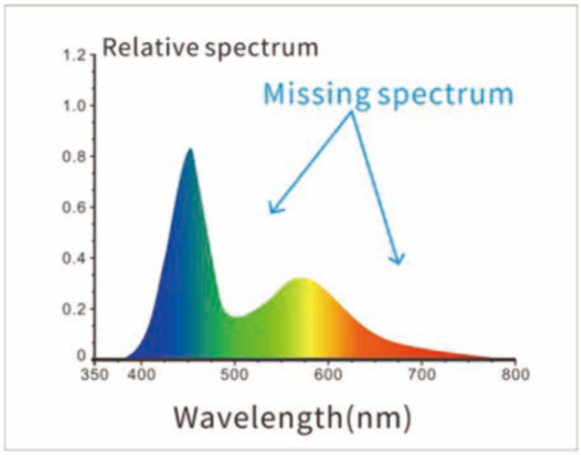
3. Multiple color measurement spaces and multiple observation light sources

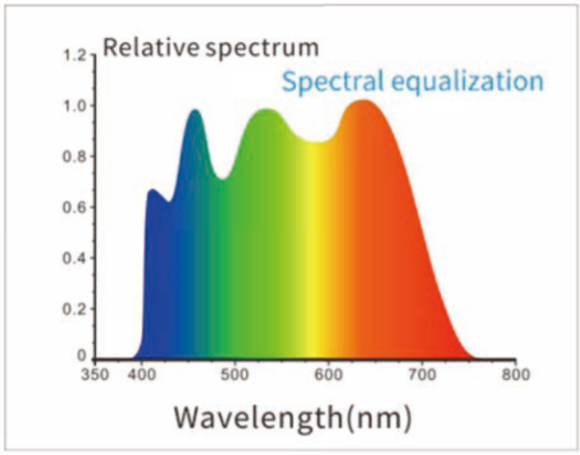
TS8296 Benchtop Spectrophotometer provides CIE LAB, XYZ, Yxy, LCh, CIE LUV, Musell, s-RGB, HunterLab, β xy, DIN Lab99 color space, as well as D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, DLF, TL83, TL84, TPL5, U30 kinds of observation light sources, which can meet the special measurement requirements under different measurement conditions.



4. Using combined full spectrum LED light source and UV light source

The full-band balanced LED light source ensures sufficient spectral distribution in the visible light range, avoids the spectral loss of white LEDs in specific bands, and ensures the speed of instrument star measurement and the accuracy of measurement results. Professional UV light source ensures more reliable UV testing.



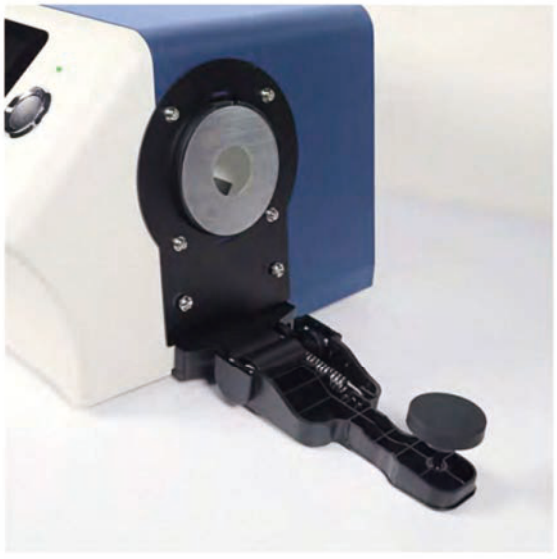


5. Metrological verification report

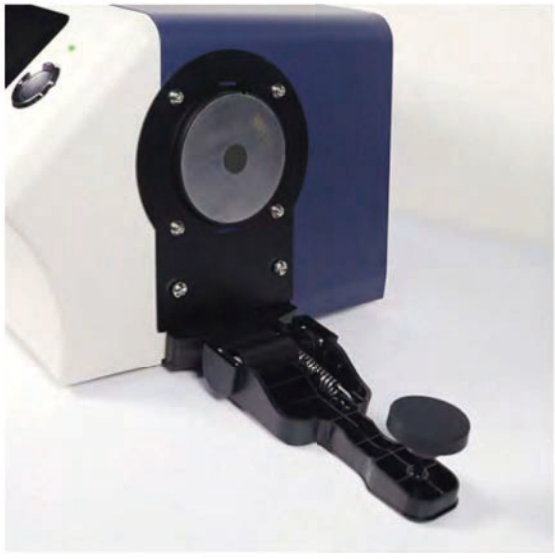
Each TS8296 desktop spectrophotometer has been verified and tested. The instrument is verified according to the measurement standards of the authoritative verification department. The measurement data is traceable to the National Metrology Institute to ensure the authority of the instrument test data.

6. Automatic identification of caliber

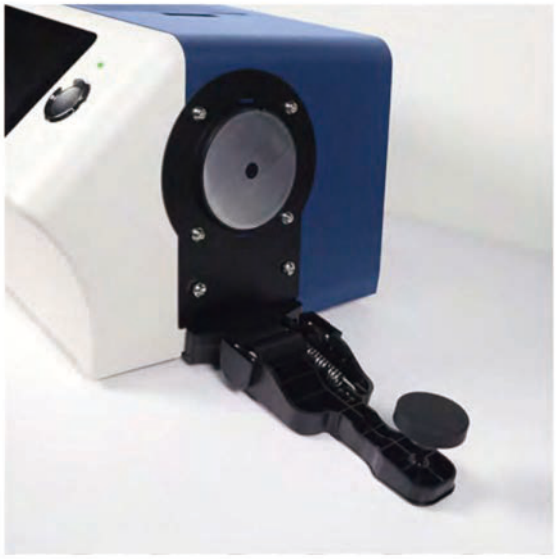
The TS8296 desktop spectrophotometer is equipped with four measuring apertures of 25.4/15/8/4mm, which can be switched arbitrarily to take into account the special needs of customers.



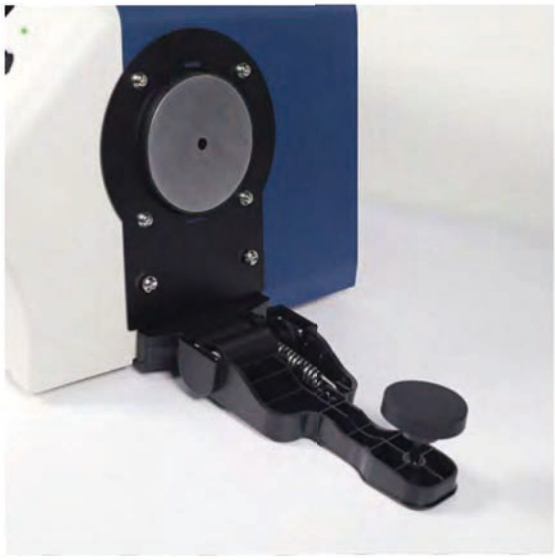
25mm



15mm



8mm



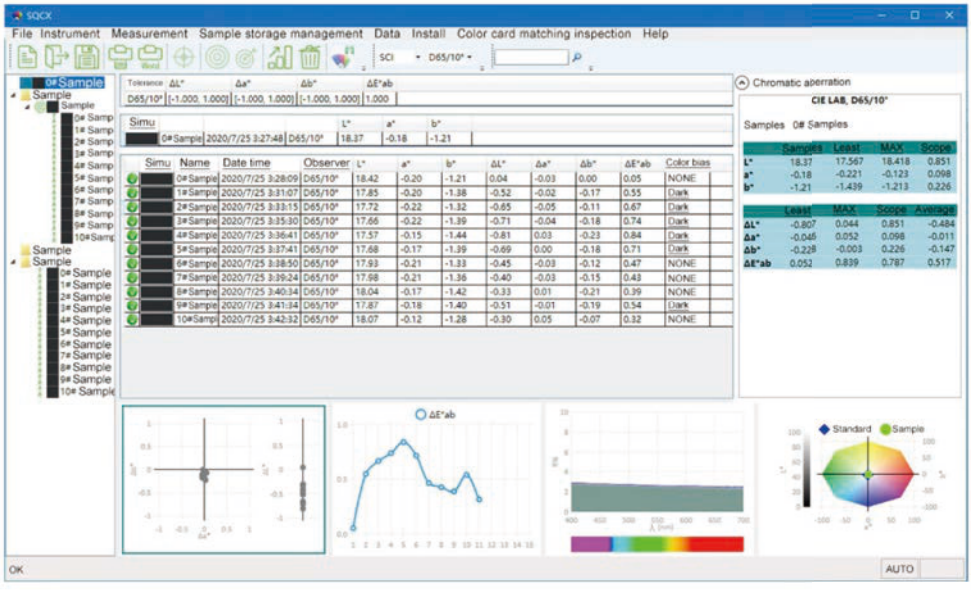
4mm

7. Industrial-grade high-definition touch screen, easy-to-use user interface

Using a 7-inch industrial-grade high-definition touch screen, the control is smooth, and the easy-to-use user interface makes the operation comfortable, convenient and easier to use.

8. Color management software

The SQCX quality management software matched with the TS8296 desktop spectrophotometer is suitable for quality monitoring and color data management in various industries. Dataize the user's color management, compare color differences, generate test reports, provide a variety of color space measurement data, and customize the customer's color management work.



4. Application

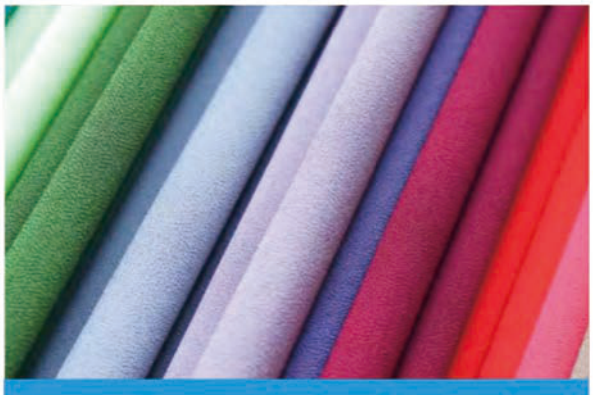
Desktop spectrophotometers are widely used in plastics, electronics, paint and ink, textile and garment printing and dyeing, printed paper products, automobiles, medical care, cosmetics and food industries, as well as in scientific research institutions and laboratories. It can accurately measure indexes such as reflection spectrum in various color spaces. With the help of this instrument, it is easy to carry out research on color matching, color management, etc., as well as product color quality management and control. The instrument is equipped with high-end color management software, which can be connected to a computer to achieve more functional expansion.

Plastic

Coating

Print

Car



Textile

Cosmetic

5. Packing list

【Standard accessories】

Benchtop Spectrophotometer

Measuring aperture

Power Adapter

USB cable

Manual

Certificate
Warranty Card

Calibrate the whiteboard
black tube

Transmission black baffle

Sample holder

Transmission dish

Computer software
(download from official website)

【Optional accessories (sold separately)】

Micro Printer

Inverted Test Fixture

Petri Dish

6. Product parameters

Model: TS8296

Optical GeometryReflect: di:8°, de:8°(diffuse illumination, 8°direction reception) ;
SCI (specular component included)/SCE (specular component excluded) ;Include UV/exclud UV
Transmittance: di:0°, de:0° (diffuse illumination: 0°direction reception) ;
SCI (specular component included)/SCE (specular component excluded) ; Include UV/exclud UV
Haze(ASTM D1003)

Standard: Conforms to CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724/1,ASTM E1164,DIN5033 Teil7

Integrating Sphere Size: Φ154mm

Light Source: 360 nm to 780 nm, Combined LED Light, 400nm cut-off light source,420nm cut-off light source

Spectrophotometric Mode: Concave Grating

Sensor: 256 Image Element Double Array CMOS Image Sensor

Wavelength Range: 360-780nm

Wavelength Interval: 10nm

Semiband Width: 10nm

Measured Reflectance Range: 0-200%

Measuring Aperture: Reflective : Φ30mm/Φ25.4mm, Φ18mm/Φ15mm, Φ10mm/Φ8mm, Φ6mm/Φ4mm;
Transmissive : Φ25.4mm, Φ4mm
Remark: 1. Automatic identification of switch aperture 2.Customers can configure the aperture and lens position according to their needs

Specular Component: Reflectance: SCI/SCE Transmittance: SCI/SCE

Color Space: CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,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)

Other Colorimetric Index: WI (ASTM E313, CIE/ISO, AATCC, Hunter),YI (ASTM D1925, ASTM 313),Metamerism index Mt,
Staining Fastness, Color Fastness, Color Strength, Opacity,APHA/Hazen/Pt-Co (Platinum Cobalt Index), Gardner Index
8° gloss, 555 color classification, haze (ASTM D1003), Saybolt (Sybert index), ASTM D1500 color scale,
Chinese Pharmacopoeia color scale

Observer Angle: 2°/10°

Illuminant: D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,DLF,TL83,TL84,TPL5,U30

Displayed Data: Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset

Measuring Time: About 2.4s (Measure SCI & SCE about 5s)

Repeatability: Spectral reflectance: Φ25.4mm/SCI, Standard deviation within 0.04%
Chromaticity value:Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.01
(After the instrument is warmed up and calibrated, measure the average value of the whiteboard 30 times at an interval of 5s)
Spectral transmittance: Φ25.4mm/SCI, Standard deviation within 0.05%
Chromaticity value:Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.02
(After the instrument is warmed up and calibrated, measure the average value of the whiteboard 30 times at an interval of 5s)

Inter-instrument Error: Φ25.4mm/SCI, Within ΔE*ab 0.12(Measured average value of 12 tiles of BCRA series Ⅱ)

Dimension: L*W*H=370x300x200mm

Weight: Approx. 9.6kg

Power: AC 24V, 3A Power adapter power supply

Illuminant Life Span: 5 years, more than 3 million times measurements

Display: 7-inch TFT color LCD, Capacitive Touch Screen

Data Port: USB, Bluetooth®, print serial port

Data Storage: Standard 5000 Pcs, Sample 40000 Pcs(SCI/SCE counts as one piece of data)

Language: Simplified Chinese, Traditional Chinese, English, (German, French, Spanish can be customized)

Standard Accessory: Power adapter, manual, quality management software (download from official website), data cable, standard calibration board, black calibration box, transmission black baffle, sample holder, 25.4mm aperture, 15mm aperture, 8mm aperture, 4mm aperture, transmission test fixture assembly , Micro-hole (4mm) transmission test fixture assembly

Optional Accessory: Mini printer, instrument upside down test fixture, petri dish