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# TS8450 PORTABLE DESKTOP SPECTROPHOTOMETER

## Portable Desktop Grating Spectrophotometer

TS8450 is a 45/0 optical portable desktop spectrophotometer, with 256 pixels dual array CMOS image sensor, imported white board, and gives consideration to the speed of measurement and the convenience of operation. It features with repeatability  $\Delta E^*_{ab}$  easily control within 0.02, and inner instrument errors  $\Delta E^*_{ab}$  control within 0.15. This accuracy measurement makes it good to use in the lab color accurate analysis and transfer. The TS8450 portable desktop spectrophotometer is also good to measure the brightness factor and color coordinates of traffic signs, markings and reflective films. Including GB 2893 and GB/T 18833 standard colors, it can customize the rectangular tolerance of polygons manually.



Flat Grating



7-inch large touch screen



400-700nm spectrum display



Color management software



SHENZHEN THREEENH TECHNOLOGY CO., LTD.



TS8450 portable desktop spectrophotometer color measurement instrument is equipped with a single customized 18/8/4mm measurement diameter, used for accurate color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries; It can be also used for fluorescence sample measurement. In addition, TS8450 portable desktop spectrophotometer is suitable for measuring the brightness factor and chromaticity coordinate of traffic road signs, marking lines and reflective film. It contains GB 2893 and GB/T 18833 standard colors and it can customize the rectangular tolerance of polygons manually.



Rotating Bracket

### Optional Accessory



Micro Printer



Foot Switch

## PRODUCT ADVANTAGES

### 1. Adopt combination full spectrum LED light source and UV light source

Full band balanced LED light source ensures sufficient spectral distribution in visible light range, avoids the spectral loss of white LED in specific band, ensures the accuracy of instrument measurement speed and measurement results, and professional UV light source ensures more reliable UV testing.

### 2. A variety of color space, a variety of observation light sources

Ts8450 portable desktop spectrophotometer color measurement instrument provides CIE LAB, XYZ, Yxy, LCh, CIE LUV, s-RGB,  $\beta$ xy, Munsell(C/2) color space, and D65, A, C, D50, F2(CWF), F7(DLF), F10(TPL5), F11(TL84), F12(TL83/U30) light sources, which can meet the special measurement requirements under different measurement conditions.

### 3. Calibration Certificate

Each TS8450 spectrophotometer has been verified and tested. After leaving the factory, each instrument is verified according to the measurement standards of authoritative verification departments, and the measurement data are traceable to the National Metrological Institute to ensure the authority of the instrument test data.

### 4. Industrial-grade HD touch screen, easy to use user interface

Using 7-inch industrial grade hd touch screen, smooth operation, the user interface is easy to use and it makes the operation to become comfortable and convenient.

### 5. Color management software

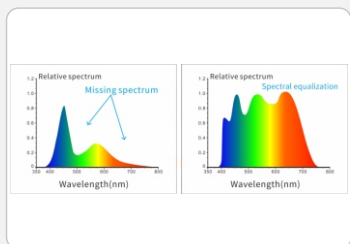
SQCX quality management software with TS8450 spectrophotometer is suitable for quality monitoring and color data management in various industries. Data the user's color management, compare color differences, generate test reports, provide multiple color space measurement data, and customize the customer's color management.

### 6. Optional Accessory

Micro printer, foot switch, rotating bracket can be freely selected according to the needs.



Horizontal or vertical measurement



Full spectrum LED light source and UV light source



Color management software

# SPECIFICATION PARAMETER

## TS8450 Portable desktop spectrophotometer

**Model:** TS8450

**Optical Geometry:** 45/0(45 ring-shaped illumination, 0 degree viewing angle), Comply to CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7

**Characteristic:** Enhanced version spectrophotometer, Customized single aperture  $\Phi 18/8/4$  mm diameter aperture, used in laboratory accurate analysis and transmission;Used for accurate color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries; It can be used for fluorescence sample measurement. It is used to measure the brightness factor and color coordinates of traffic signs, markings and reflective films. It contains GB 2893 and GB/T 18833 standard colors. It can customize the rectangular tolerance of polygons manually.

**Integrating Sphere Size:**  $\Phi 40$ mm

**Light Source:** Combined full spectrum LED light source, UV light source

**Spectrophotometric Mode:** Flat Grating

**Sensors:** 256 Image Element Double Array CMOS Image Sensor

**Wavelength Range:** 400~700nm

**Wavelength Interval:** 10nm

**Semiband Width:** 10nm

**Measured Reflectance Range:** 0~200%

**Measuring Aperture:** Customized single aperture,LAV: $\Phi 18$ mm/ $\Phi 20$ mm;MAV: $\Phi 8$ mm/ $\Phi 10$ mm;SAV: $\Phi 4$ mm/ $\Phi 5$ mm

**Specular Component:** 45/0

**Color Space:** CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,HunterLab, $\beta xy$ ,DIN Lab99 Munsell(C/2)

**Color Difference Formula:**  $\Delta E^*ab, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00$ , DIN $\Delta E99, \Delta E$ (Hunter)

**Other Colorimetric Index:** WI(ASTM E313,CIE/ISO,AATCC,Hunter), YI(ASTM D1925,ASTM 313),Metamerism Index MI,Staining Fastness, Color Fastness, Color Strength, Opacity, 8° Glossiness,555 tone classification

**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)

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

**Measuring Time:** About 1.8s

**Repeatability:** Chromaticity value: MAV/SCI, within  $\Delta E^*ab$  0.02 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration)

**Inter-instrument Error:** MAV/SCI, Within  $\Delta E^*ab$  0.15(Average for 12 BCRA Series II color tiles)

**Measurement Mode:** Single Measurement, Average Measurement(2-99times)

**Dimension:** L\*W\*H=370X240X260mm

**Weight:** About 7.8kg

**Battery:** 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 ScreenData Port: USB, Bluetooth ®5.0, trigger switch interface

**Data Storage:** Standard 1000 Pcs, Sample 30000 Pcs

**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, Aperture (Optional Aperture)

**Optional Accessory:** Micro Printer, Foot Switch, Rotating Bracket

**Notes:** Technical parameters are only for reference, subject to the actual sale of the product



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