

MAKE THE COLOR DIFFERENCE CLEAR

Handheld Grating Spectrophotometer



1000-line grating with dual optical path system

Domestic high-quality spectrophotometer

Shenzhen Tianran Technology Co., Ltd. is a high-tech enterprise. We research, develop, produce and market photoelectric detection products in photoelectric detection technology field and color management field.



PRODUCT FEATURES



- 1 D / 8 geometric optical structure, conforming to CIE No.15, GB / T 3978, GB 2893, GB / T 18833, iso7724 / 1, ASTM e1164, din5033 teil7;
- 2 Adopt combined LED light source with high life and low power consumption, including UV / excluding UV;
- 3 Customized one 8mm or 4mm aperture (the flat/ tip measuring aperture can be switched easily, which is suitable for more tested sample)
- 4 Dual optical path system, the optical resolution in the visible range is less than 10nm, which can measure the SCI and SCE spectrum of the sample at the same time;
- 5 Accurate spectrum and lab data, used for color matching and accurate color transmission;
- 6 High hardware configuration: 3.5-inch TFT true color screen, capacitive touch screen, 1000 line blazed grating, silicon photocell array detector with large photosensitive area, etc;
- 7 USB interface, convenient for expansion of various functions;
- 8 Super dirt resistant and stable standard white calibration board;
- 9 Large capacity storage space, which can store more than 30000 pieces of test data
- 10 2/10 standard observer's angle, multiple light source modes, multiple surface color systems, meet various standards of chromaticity indicators, and the needs of various customers for color measurement;
- 11 Camera locating position and Stabilizer cross measurement position;
- 12 PC software has powerful function expansion;

APPLICATION INDUSTRY

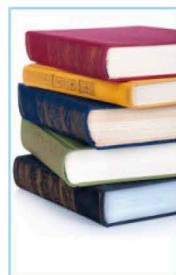
It is widely used in plastics, electronics, paints and inks, textile and garment printing and dyeing, printing paper, automotive, medical, cosmetics and food industries, scientific research institutions and laboratories. The instrument can accurately measure multiple color indices such as reflection spectrum in multiple color spaces. With this instrument, research on color matching, color management, etc. can be easily performed, and precise product quality management control can also be performed. The instrument is equipped with high-end color management software, which can be connected to a computer for more functions.



Plastics



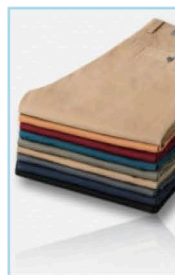
Paint & Ink



Printing



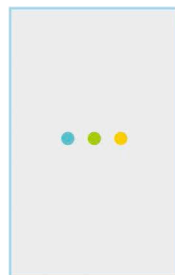
Food



Textiles



Medicines



Others

SPECIFICATION PARAMETER

Model : TS7600**Optical Geometry Reflect :** di:8°, de:8°(diffused illumination, 8-degree viewing angle)SCI (specular component ncluded)/SCE (specular component excluded) ; Include UV / excluded UV light source; Conforms to CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164, DIN5033 Teil7**Characteristic :** Customized one aperture, It 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**Senso :** Silicon photodiode array (double row 40 groups)**Wavelength Range :** 400~700nm**Wavelength Interval :** 10nm**Semiband Width :** 10nm**Measured Reflectance Range :** 0-200%**Measuring Aperture Customized one aperture :** MAV:Φ8mm/Φ10mm; SAV:Φ4mm/Φ5mm**Specular Component :** SCI&SCE**Color Space :** CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,βxy,Munsell(C/2)**Color Difference Formula :** $\Delta E^*ab, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00$ **Other Colorimetric Index :** WI(ASTM E313, CIE/ISO,AATCC,Hunter),YI(ASTM D1925, ASTM 313),Staining Fastness, Color Fastness, Color Strength, Opacity,8° Glossiness,**Observer Angle :** 2°/10°**Illuminant :** D65,A,C,D50,F2(CWF),F7(DLF),F10(TPL5),F11(TL84),F12(TL83/U30)**Displayed Data :** Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset**Measuring Time :** About 1.5s (Measure SCI & SCE about 3.2s)**Repeatability :** Spectral reflectance: MAV/SCI, Standard deviation within 0.1% (400 nm to 700 nm: within 0.2%)Chromaticity value: MAV/SCI, within ΔE^*ab 0.04 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)Inter-instrument Error: MAV/SCI, Within ΔE^*ab 0.2(Average for 12 BCRA Series II color tiles)**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, 6000 measurements within 8 hours**Illuminant Life Span :** 5 years, more than 3 million times measurements**Displayed Data :** 3.5-inch TFT color LCD, Capacitive Touch Screen**Data Port :** USB**Data Storage :** Standard 1000 Pcs, Sample 20000 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, User Guide, PC Software(Download from office website), USB cable, White and Black Calibration Cavity, Protective Cover, Wrist strap, One aperture (8mm or 4mm)**Optional Accessory :** Micro Printer, Powder Test Box**Notes :** The specifications are subject to change without notice.