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TS8280 Portable Desktop Spectrophotometer

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2Introduction

The portable desktop spectrophotometer TS8280 is a spectrophotometer developed by 3NH with independent core spectroscopic technology. It adopts built-in silicon photodiode array (40 groups in double rows) sensors and imported white board, and gives consideration to the speed of measurement and the convenience of operation. The rotating and pressing structure makes the test more convenient. TS8280 portable desktop spectrophotometer color measurement instrument features with repeatability Δ E * ab easily control within 0.05, and inner errors Δ E * ab control within 0.15. This accuracy measurement makes it good used in the lab color accurate analysis and transfer.

**Application of TS8280 portable Desktop spectrophotometer:**

TS8280 portable desktop spectrophotometer color measurement instrument equipped with Φ30 mm diameter measurement, to adapt to the measurement of large samples, suitable for precise color measurement and quality control in textile and garment printing and dyeing, plastic electronics, ceramics and other industries; and it can be used for fluorescence sample measurement.

Technical Advantages:
1.Adopt international common use d/8 SCI/SCE Synthesis technology

TS8280 spectrocolorimeter adopts D/8(diffused illumination, 8-degree viewing angle) which is widely applicable in the world, and SCI/SCE (specular component included/specular component excluded)

Synthesis technology, supporting SCI+SCE simultaneous rapid measurement, and the test time is about 3.2 seconds.
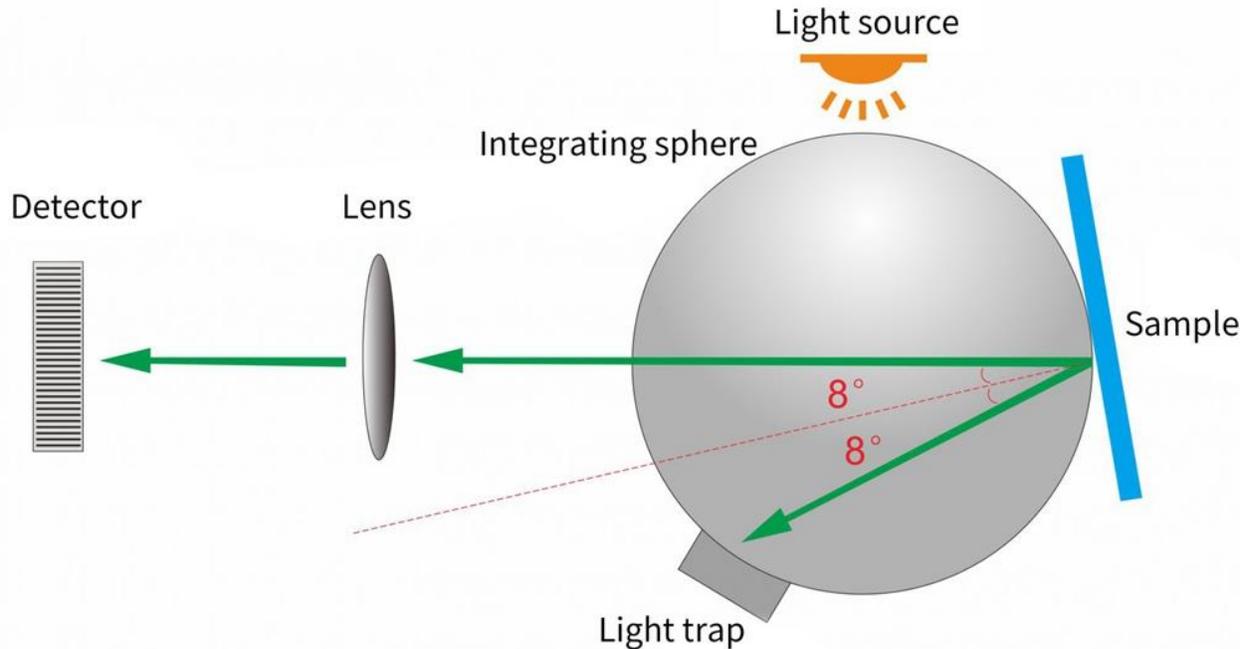
**2. Silicon photodiode array sensor (40 groups with double rows)**

Double 40 array sensor with larger area, high light saturation, high sensitivity of low light and wide spectral response range ensure the measurement speed, accuracy, stability and consistency of the instrument.

3.A variety of color space, a variety of observation light sources

TS8280 portable desktop spectrophotometer color measurement instrument provides CIE LAB, XYZ, Yxy, LCh, CIE LUV, s - RGB, HunterLab, βxy, DIN Lab99, Munsell (C / 2) color space, and D65, A, C, D50, D55, D75, F1, F2 (CWF), F3, F4 and F5, F6 and F7 (DLF), F8, F9, F10 (TPL5), and F11 (TL84), F12 (TL83 / U30) light sources, which can meet the special measurement requirements under different measurement conditions.

4.Adopt combination full spectrum LED light source and UV light source Each

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.
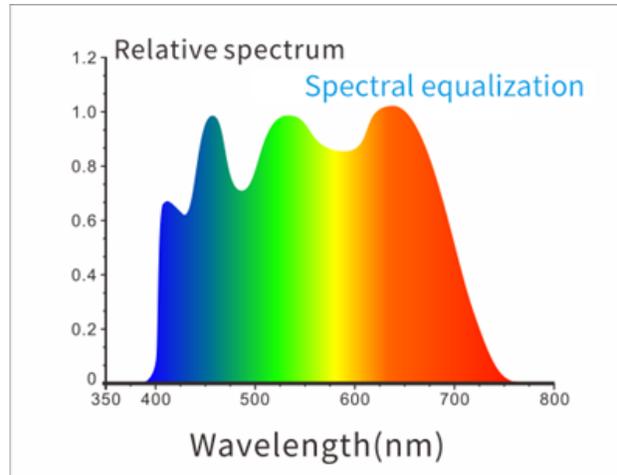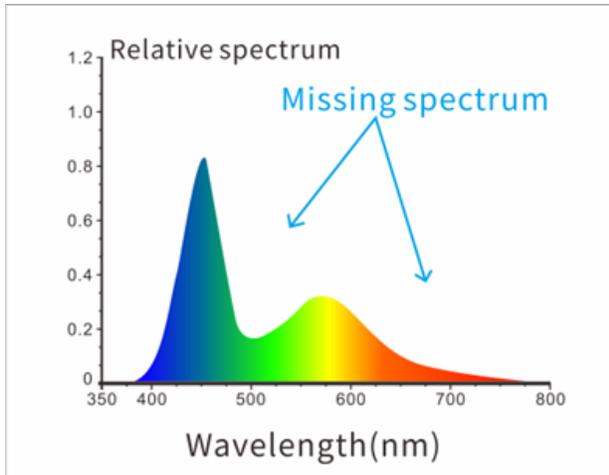
5.Camera locating can clearly observe the measured area

TS8280 spectrophotometer has a built-in camera for positioning, which can accurately determine whether the measured part of the object is the center of the target through real-time viewing by the camera, thus improving the measurement efficiency and accuracy.

6. Calirbation Certificate

TS8280 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 Metrotechnical Institute to ensure the authority of the instrument test data.

7.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.

8.Color management software

SQCX quality management software with TS8280 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.
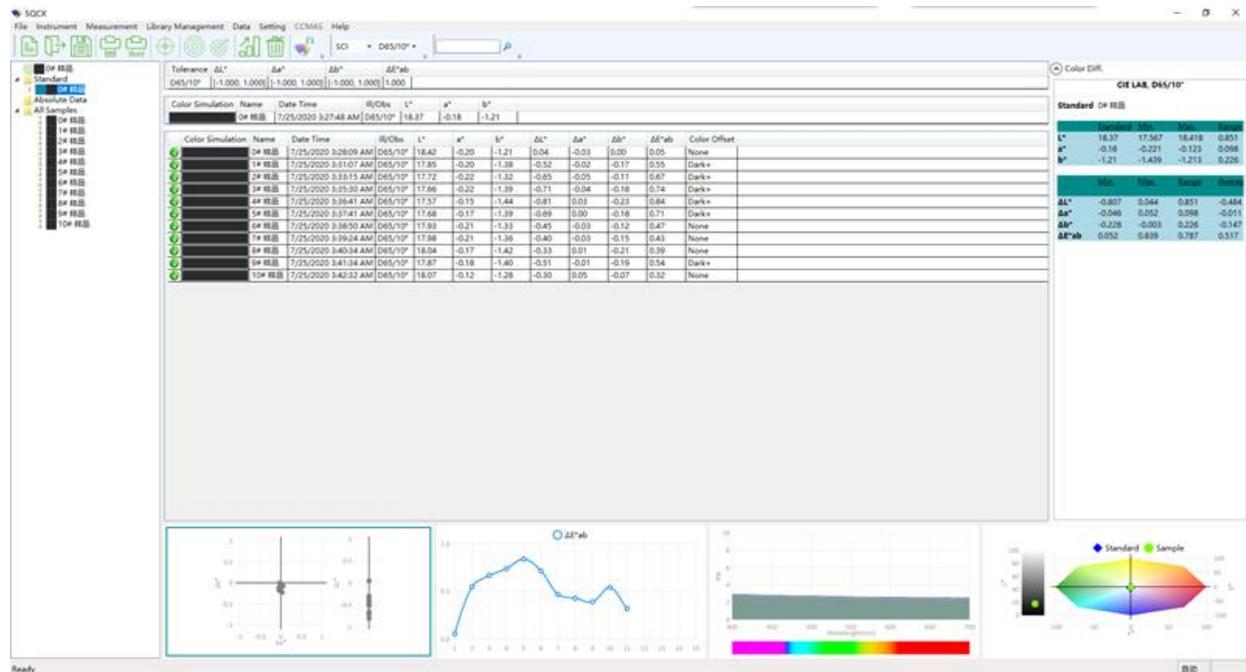
9.Optional Accessory

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

Technical Specification

Model	TS8280
Optical Geometry	D/8(diffused illumination, 8-degree viewing angle)
	SCI (specular component included)/SCE (specular component excluded)；Include UV / excluded UV light source
	Comply to CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7
Characteristic	Φ30mm apertures, to adapt to the measurement of large sample;
	Rotary press type structure, more convenient for testing;
	Accurate measurement, can be used for laboratory color accurate analysis and transmission;
	Suitable for precise color measurement and quality control in textile and garment printing and dyeing, plastic electronics, ceramics and other industries; It can be used for fluorescence sample measurement.

Integrating Sphere Size	Φ152mm
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	Φ30mm/Φ25.4mm
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	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00, DINΔE99,ΔE(Hunter)
	WI(ASTM E313,CIE/ISO,AATCC,Hunter),

Other Colorimetric Index	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 1.5s (Measure SCI & SCE about 3.2s)
Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.05 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	MAV/SCI, Within ΔE*ab 0.15 (Average for 12 BCRA Series II color tiles)
Measurement Mode	Single Measurement, Average Measurement(2-99times)
Locating Method	Camera Locating
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 Screen
Data 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℃, 0~85%RH (no condensing), Altitude < 2000m
Storage Environment	-20~50℃, 0~85%RH (no condensing)
Standard Accessory	Power Adapter, USB Cable, User Guide, PC Software(Download from office website), White and Black Calibration Cavity,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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