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### YS4580-Grating spectrophotometer for traffic sign

YS4580 spectrophotometer uses 45/0 (45 degree ring illumination, 0 degree reception) geometric optical structure in accordance with CIE No. 15 and adopts concave grating spectrometry to accurately measure sample reflectance and various colorimetric data; Equipped with a large measuring aperture of  $\Phi 20$  mm for traffic signs, color matching, precise color transfer; Built-in GB2893, GB/T18833 standard color, can be manually customized polygonal rectangle tolerance, one button to realize the measurement of traffic road signs, marking lines, reflective film brightness factor and chromaticity coordinates. For uneven sample with stripes or granular samples, the instrument has high accuracy and high stability.



Con-cave Grating



USB / Bluetooth @ 4.0



Long life LED light sources



$\Phi 20$ mm measuring aperture



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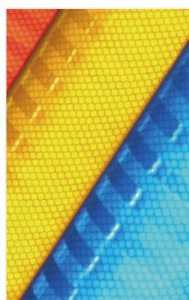
## PRODUCT FEATURES

- 1.Beautiful appearance and perfect combination with ergonomic structure design;
- 2.Built-in standard polygon tolerance setting and specific traffic sign gamut, one button to realize the measurement of traffic road signs, marking lines, reflective film brightness factor and chromaticity coordinates;
- 3.Conforms with CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724/1,ASTM E1164,DIN5033 Teil7, GB 2893、GB/T 18833;
- 4.High electronic hardware configuration: 3.5-inch TFT color LCD,Capacitive Touch Screen, concave grating, 256 Image Element Double Arrays CMOS Image Sensor;
5. Measure sample spectra, accurate Lab data , can be used in color matching and accurate color transmission;
- 6.Adopt high-life and low-power combined LED light source, including UV/excluding UV;
- 7.High-configuration electronic hardware: 3.5-inch TFT true-color screen, capacitive touch screen, concave grating, 256-pixel dual-array CMOS image sensor, etc.
- 8.Large capacity storage space, over 30,000 measurement data;
- 9.Two standard observer angles, multiple light source modes and color systems to meet the needs of customers for color measurement.
- 10.PC software has a powerful function extension.



## APPLICATION INDUSTRIES

The grating spectrophotometer can easily achieve the accurate transmission of color, and can also be used as the detection equipment of the accurate color matching system; it is used for accurate color measurement and quality control of traffic road signs, plastics, electronics, paint and ink, textile and garment, printing and dyeing , ceramics and other industries. The instrument has a separate UV light source for fluorescent sample measurements.



Traffic road sign



Automobile



Plastics



Paint



Food stuff



Laboratory



Others

## SPECIFICATION PARAMETERS

**Model:** YS4580

**Illumination:** 45/0(45 circular illumination, vertical viewing)

**Standard:** CIE No.15, GB/T3978,GB2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033Teil7

**Integrating Sphere Size:** 48mm

**Light Source:** Combined LED Light,UV Light

**Spectrophotometric Mode:** Concave Grating

**Sensor:** 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 :** Φ20mm

**Measurement mode:** single measurement, average measurement(2-99 times)

**Color Space:** CIE LAB, XYZ, Yxy, LCh, CIE LUV, Hunter LAB,βxy

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

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

**Illuminant:** D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF,U30, TL83, TL84, U35

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

**Observer Angle:** 2°/10°

**Measuring Time:** 1.5s

**Repeatability:** Spectral reflectance: MAV, standard deviation within 0.1%(400-700nm: within 0.2%)

**Chromaticity value:** MAV, within $\Delta E^*ab 0.04$ (After calibration, measure the average value of the white board 30 times each 5S.)

**Inter-instrument agreement:** MAV, within $\Delta E^*ab 0.2$ (Average value for 12 BCRA series II color tiles)

**Battery:** Li-ion battery. 5000 measurements within 8 hours

**Dimension:** L\*W\*H=184\*77\*105mm

**Weight:** 600g

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

**Display:** 3.5-inch TFT color LCD, Capacitive Touch Screen

**Data Port:** USB/Bluetooth 4.0 dual mode (compatible with 2.1)

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

**Language:** English, Chinese

**Operating Environment:** 0~40°C, 0~85%RH (no condensing), Altitude < 2000m

**Storage Environment:** -20~50°C, 0~85%RH (no condensing)

**Standard accessories:** power adapter, data line, built-in lithium batteries, instructions, quality control software (download from official website), black and white calibration board, protection cover, polarization filter box(Optional accessories: Micro printer, Powder test box, multi-functional test component, locating plate)

**3nh**<sup>®</sup>  
Focus on Color

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