



### YS4560- Advanced grating spectrophotometer

YS4560 Advanced 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; The instrument is equipped with  $\Phi 8$ ,  $\Phi 4$ mm double measuring aperture, used for traffic signs and accurate color measurement and quality control in various industries. It has a separate UV source for fluorescence sample measurements.



Con-cave Grating



USB / Bluetooth ® 4.0



Long life LED  
light sources



$\Phi 8$  &  $\Phi 4$ mm dual  
measuring apertures



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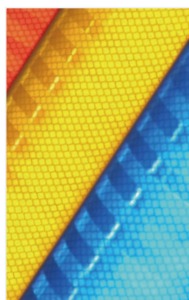
## PRODUCT FEATURES

- 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.The instrument is equipped with  $\phi$  8mm and  $\phi$  4mm aperture(optional  $\phi$  10 mm and  $\phi$  5mm) suitable for more tested samples.
- 8.Large capacity storage space, over 30,000 measurement data.
- 9.USB / Bluetooth 4.0 dual communication mode, more adaptable.
- 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



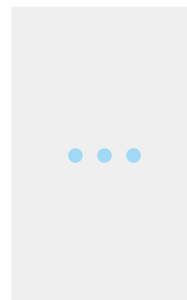
Paint



Food stuff



Laboratory



Others

## SPECIFICATION PARAMETERS

**Model:** YS4560

**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:** MAV: $\phi$ 8mm/ $\phi$ 10mm; SAV: $\phi$ 4mm/ $\phi$ 5mm

**Observer Angle:** 2°/10°

**Color Space:** CIE LAB, XYZ, Yxy, LCh, CIE LUV, Hunter LAB, $\beta$ xy

**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

**Measuring Time:** 1.5s

**Repeatability:** Spectral reflectance: MAV, standard deviation within 0.08%(400~700nm: within 0.18%)

**Chromaticity value:** MAV, within  $\Delta E^*ab$  0.03(After calibration, measure the average value of the white board 30 times each 5S.)

**Inter-instrument agreement:** MAV, within  $\Delta E^*ab$  0.15(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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