

Accurate measurement of sample reflectance and various chromaticity data



YS4510- Standard grating spectrophotometer

YS4510 standard spectrophotometer with 45/0 geometrical optics structure(45 ring-shaped illumination ,vertical viewing), comply with C I E N o . 1 5. Adopting concave grating light splitting method. accurately measure the reflectivity and various chromaticity data of samples. users can customize the measurement aperture($\Phi 8 / \Phi 4 / \Phi 2$ m m) according to the sample measuring demands, meet the industry accurate color measurement and quality control.



Concave-Grating Spectral



Long life LED light sources



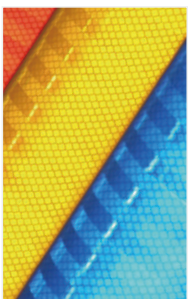
Customized measuring aperture



High-configuration electronic hardware

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.



Traffic road sign



Textile



Plastic



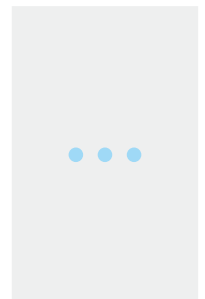
Paint



Food



Laboratory



Other

PRODUCT FEATURES

- 1.Perfect combination of beautiful appearance and the human body mechanics structural design
- 2.45/0 geometrical optics, conforms with CIE No.15, GB/T 3978,GB 2893,GB/T 18833,ISO7724/1,ASTM E1164,DIN5033 Teil7, GB 2893、GB/T 18833
- 3.Accurate color measurement and quality control
- 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.Use long life and low power consumption combined LED light source
- 7.Customized single aperture: MAV: >8mm/φ10mm; SAV: φ4mm/φ5mm; SSAV: φ2mm/φ3mm, suitable for more samples
- 8.USB port, widely useful
- 9.PC software has a powerful function extension

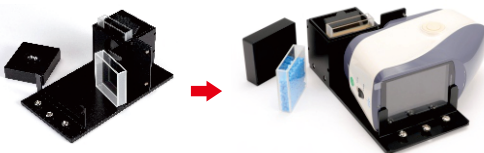


OPTIONAL ACCESSORIES

The instrument is equipped with various accessories; Such as micro printer, powder test box, etc.; Meet the needs of more measurement samples.



Powder test box: Easy to use, focusing on powdered target measurement.



Multifunctional test components: can be used to test liquid reagents, sauces (such as ketchup, paint), powders (such as coffeeBrown), color masterbatch, etc.



Micro printer: easy to carry, without computer can continuously print out the measurement of various parameters, easy to save.

SPECIFICATION PARAMETERS

Model: YS4510

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

Standard: CIE No.15, GB/T3978,GB2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7

Integrating Sphere Size: 48mm

Light Source: Combined LED 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: customized single aperture: MAV:φ8mm/φ10mm; SAV:φ4mm/φ5mm;SSAV:φ2mm/φ3mm

Color Space: CIELAB,XYZ,Yxy,LCh,CIELUV,s-RGB,HunterLab,βxy,DINLab99,Munsell(C/2)

Color Difference Formula: $\Delta E^*ab, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:190^*cmc(1:1)), \Delta E^*00, \text{DIN}\Delta E99, \Delta E(\text{Hunter})$

Other Colorimetric Index: Spectral Reflectance, Whiteness (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, Hunter, Taube-Berger-Stensby), Yellowness (ASTM D1925, ASTM E313-00, ASTM E313-73), Metamerism Index Mt, Colorfastness to Crocking, Colorfastness to Light, Strength (Dye Strength, Coloring Power), Opacity, 555 Hue Classification, Blackness (My, dM), Color Density CMYK, Tint (ASTM E313-00), Color Density, Munsell (some functions realized through the host computer).

Illuminant: D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,DLF,TL83,TL84, TPL5,U30,B,U35,NBF,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1, LED-V2,LED-C2,LED-C3,LED-C5(a total of 41 types of light sources,some of which are realized through the host computer).

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

Software Support:Andriod,IOS,Windows,WeChat Mini Program,HarmonyOS
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 ΔE^*ab 0.05(After calibration, measure the average value of the white board 30 times each 5S.)

Inter-instrument agreement: MAV, within ΔE^*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

Data Storage: Standard 500 Pcs, Sample 20000 Pcs

Language: Simplified Chinese, English, Traditional Chinese, Russian, Italian, German, Portuguese, Spanish, French

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)