

# **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(Φ 8 / Φ 4 / Φ 2 m m) according to the sample measuring demands, meet the industry accurate color measurement and quality control.







Long life LED light sources



Customized measuring aperture electronic hardware



High-configuration











#### **PRODUCT FEATURES**

1.Perfect combination of beautiful appearance and the human body mechanics structural

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 limage 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



#### **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

#### **SPECIFICATION PARAMETERS**

Model: YS4510

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

Standard: CIE No.15, GB/T3978, GB2893, GB/T 18833, 1S07724-1, 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: CIE LAB, XYZ, Yxy, LCh, CIE LUV, Hunter LAB,βxy

 $\textbf{Color Difference Formula:} \triangle \texttt{E*ab}, \triangle \texttt{E*uv}, \triangle \texttt{E*94}, \triangle \texttt{E*cmc} (2:1), \triangle \texttt{E*cmc} (1:1), \triangle \texttt{E*00}, \triangle \texttt{E} (\texttt{Hunter})$ 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

**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 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△E\*ab 0.05(After calibration, measure the

average value of the white board 30 times each 5S.)

**Inter-instrument agreement:** MAV, within △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

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

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

Data Port: USB

Service Hotline: 400-666-2522

Data Storage: Standard 500 Pcs, Sample 20000 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)



### SHENZHEN ThreeNH TECHNOLOGY CO., LTD.

Address: F/6, Block 5B, Skyworth Inno Valley, Tangtou 1st Road,

Shiyan, Baoan District, Shenzhen, P.R. China

Tel: 86-0755-26508999 Fax: 86-0755-27190609

Email: 3nh@3nh.com