

# Restore True Color, Enjoy Color Matching



## YS3020 Customized Aperture Spectrophotometer

YS3020 is independently developed by 3nh, who has completed intellectual property rights. With variety of light sources, single aperture (8 or 4 or 1\*3 mm), SCI/SCE, USB/Bluetooth, it has high accuracy and standard storage, very suitable for lab color analysis and transmission. Many color spaces make it widely used in lots of applications.



Con-cave Grating



USB/Bluetooth



LED light



Camera Locating



## Product Features

1. Beautiful appearance, perfect combination design;
2. D/8 geometrical optics, conforms with CIE No.15, GB/T 3978, GB2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7;
3. Combined LED light source, including UV/excluding UV;
4. Optional 8mm/4mm/1×3mm aperture, support both SCI & SCE;
5. Accurate lab reflectance for color matching and transmission ;
6. USB/Bluetooth 4.0, dual modes, widely useful;
7. Super stain-resistant and stable standard white calibration plate;
8. Large capacity storage space, over 20,000 measurement data;
9. Camera Locating Function, better position;
10. PC software has a powerful function extension.



## Application Industries



Automobile

Leather

Plastics

Paint

Foodstuff

Laboratory

Others

## Specification Parameters

**Model:** YS 3020 Grating Spectrophotometer

**Optical Geometry:** Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)

**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 Aperture: 8mm/4mm/1×3mm

**Specular Component:** SCI&SCE

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

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

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

**Observer Angle:** 2°/10°

**Measuring Time:** 2.6s

**Repeatability:** MAV/SCI:  $\Delta E^* \leq 0.04$

**Inter-instrument Error:** MAV/SCI:  $\Delta E^* \leq 0.2$

**Measurement Mode:** Single Measurement, Average Measurement

**Locating Method:** Camera Locating

**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

**Data Storage:** Standard 1000 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 Accessory:** Power Adapter, Built-In Li-ion Battery, User Guide, PC Software, White and Black Calibration Cavity, Dust Cover

**Optional Accessory:** Micro Printer, Powder Test Box