

YS6010 Benchtop Grating Spectrophotometer

YS6010 is a benchtop grating spectrophotometer which is developed by 3nh independently with independent intellectual property. YS6010 has many features, like 7 inches TFT capacitive touch screen display, full illuminants, reflective d/8 and transmissive d/0 geometry (including or excluding UV). With very stable and precise color measurement, large storage and powerful PC software all makes YS6010 ideal for color analysis within R&D and laboratory environments.



Features

- 1, High configuration of hardware: 7 inches TFT Color Capacitive Touch-screen Display; Bluetooth 2.1; Concave Grating.
- 2, Double Array 256 Image Element CMOS Sensor; Long life-span stable LED, UV LED and xenon lamp.
- 3, With reflective and transmissive spectrum, accurate Lab value, good to calculate color formula and do precise color transmission.
- 4, Auto identify measuring aperture. Freely switchable between 3 measuring apertures: Φ 25.4mm/8mm/4mm. Users also can customize apertures.
- 5, Built-in temperature sensor to monitor and compensate the measuring temperature to ensure the measurement more precision.
- 6, Wavelength range 360nm – 780nm. Built-in 400nm cut off, more professional in UV measurement.

7, Independent light source detector, continuously monitor the condition of light sources to ensure the light source reliable.

8, Multiple measurement modes: Quality Management Mode, Sample Mode; Meet more users' requirement.

9, Multiple accessories, sample holders, fixation clamp, suitable to more working condition.

10, Big capacity data storage, for 40000 pieces test result.

11, Built-in camera locating.

12, More powerful extended functions at the PC software.

Application Industry

YS6010 benchtop spectrophotometer is used to do precise color analysis and transmission in laboratories. It can be widely applied in different industries, such as plastics, electronics, paint and ink, printing, garments, leather, paper, auto, medical, cosmetics, food, science institutes, laboratories.

Technical Specification

YS6010	Specification
Optical Geometry	Reflectance: d/8 (SCI&SCE; Include UV/Exclude UV) Transmittance: d/0 (SCI&SCE; Include UV/Exclude UV) Conforms to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil7
Specular Component	Reflectance: SCI&SCE Transmittance: SCI&SCE
Integrating Sphere Size	Φ 154mm
Sensor	256 Image Element Double Array CMOS Image Sensor
Light Source Device	360nm-780nm Combined LED Lamp, 400nm cut-off, 420nm cut-off, UV Lamp
Illuminants	D65, A, C, UV, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12
Spectrophotometric Mode	Concave Grating
Observer Angle	2° & 10°
Repeatability	Spectral reflectance: Φ25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%) Chromaticity value: Φ25.4mm/SCI, Standard deviation within ΔE*ab 0.03 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Spectral Transmittance: Φ25.4mm/SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%) Chromaticity value: Φ25.4mm/SCI, Standard deviation

	within ΔE^*ab 0.03 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	$\Phi 25.4\text{mm}/\text{SCI}$, Within ΔE^*ab 0.15 (Average for 12 BCRA Series II color tiles)
Wavelength Range	360-780nm
Wavelength Pitch	10nm
Semiband Width	10nm
Reflectance Range	0~200%
Measuring Aperture	Reflective: $\Phi 30\text{mm}/\Phi 25.4\text{mm}$, $\Phi 10\text{mm}/\Phi 8\text{mm}$, $\Phi 6\text{mm}/\Phi 4\text{mm}$; Transmissive: $\Phi 30\text{mm}/\Phi 25.4\text{mm}$;
Color Space	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB, Munsell, s- RGB, HunterLab, DIN, β_{xy}
Color Difference Formula	ΔE^*ab , ΔE^*uv , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$, ΔE^*00v , $\Delta E(\text{Hunter})$, DIN $\Delta E99$
Displayed Data	Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
Colorimetric Index	WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), TI (ASTM E313, CIE/ISO), MI (Metamerism Index), Staining Fastness, Color Fastness, Color Strength, Opacity, Gardner Index, Pt-Co Index, 555 Index,
PC Terminal Software	SQCX
Data Storage Capacity	Standard: 5000 Pcs; Sample: 40000 Pcs. (One PCS can include both SCI and SCE)
Data Port	USB & Bluetooth
Locating Method	Camera Locating
Measurement Mode	Single Measurement & Average Measurement
Screen	7" TFT Capacitive Screen-touch Display
Light Source Device Life	5 years, more than 3 million times measurements.
Power Supply	DC 24V, 2A Power Adapter
Size	370×300×200mm
Weight	16kg
Language	English & Chinese
Working Environment	Temperature: 0~40C°; Humidity: 0~85% (No Condensation)
Storage Environment	Temperature: -20~50C°; Humidity: 0~85% (No Condensation)
Standard Accessory	White and Black Calibration Board, Checking Green Board, Sample Holder, $\Phi 4\text{mm}$, $\Phi 8\text{mm}$, $\Phi 25.4\text{mm}$ Aperture, Power Adapter, USB Cable, User Guide, PC Software
Optional Accessory	Micro-printer, Transmissive Test Clamp Component

