



## Spectrophotometer TP 3100

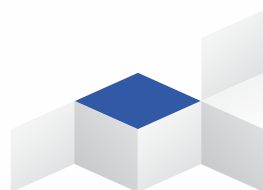


A color spectrophotometer is an instrument designed for physical sample analysis via full spectrum color measurement. Color spectrophotometers offer a higher level of flexibility and versatility than colorimeters due in part to the fact that they offer multiple illuminant/observer combinations and can operate in multiple geometric arrangements.

With the D/8 geometric optical illumination recommended by CIE , the instruments can measure SCI/SCE reflectance data of sample , and can measure and indicate all color difference formulas and color indexes in various of color spaces accurately. Conforms with CIE No.15,GB/T 3978,GB2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil.

### Features :

- concave grating, 256 Image Element Double Arrays CMOS Image Sensor;
- equipped with long life and low power consumption combined LED light source
- Switchable 8/4mm aperture,
- Can support both SCI and SCE at the same time
- Measure sample spectra, accurate Lab data , can be used in color matching and accurate color transmission;
- 3.5-inch TFT color LCD,Capacitive Touch Screen,
- Dual mode for data transferring USB/Bluetooth 2.1
- Super stain-resistant and stable standard white calibration plate;
- Capacity to store measurements upto 2000 standard readings & 20000 sample readings.
- Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data which makes the instrument useful in almost every industry.





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## Technical Specifications :

<b>Optical Geometry</b>	Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)
<b>Integrating Sphere Size</b>	48mm
<b>Light Source</b>	Combined LED Light, UV Light
<b>Spectrophotometric Mode</b>	Concave Grating
<b>Sensor</b>	256 Image Element Double Array CMOS Image Sensor
<b>Wavelength Range</b>	400-700nm
<b>Wavelength Interval</b>	10nm
<b>Measuring Aperture</b>	Dual Aperture: 10mm/8mm & 5mm/4mm
<b>Specular Component</b>	SCI&SCE
<b>Color Space</b>	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB, RGB
<b>Color Difference Formula</b>	$\Delta E^*_{ab}$ , $\Delta E^*_{uv}$ , $\Delta E^*_{94}$ , $\Delta E^*_{cmc}(2:1)$ , $\Delta E^*_{cmc}(1:1)$ , $\Delta E^*_{00v}$ , $\Delta E$ (Hunter)
<b>Other Colorimetric Index</b>	WI(ASTM E313, CIE/ISO, AATCC, Hunter), YI(ASTM D1925, ASTM 313), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity, 8° Glossiness
<b>Observer Angle</b>	2°/10°
<b>Illuminant</b>	D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12
<b>Displayed Data</b>	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
<b>Measuring Time</b>	2.6s
<b>Repeatability</b>	MAV/SCI: $\Delta E^* \leq 0.03$
<b>Measurement Mode</b>	Single Measurement, Average Measurement
<b>Battery</b>	Li-ion battery. 5000 measurements within 8 hours
<b>Dimension</b>	L*W*H = 184*77*105mm
<b>Weight</b>	600g
<b>Illuminant Life Span</b>	5 years, more than 3 million times measurements
<b>Display</b>	3.5-inch TFT color LCD, Capacitive Touch Screen
<b>Data Port</b>	USB, Bluetooth 4.0
<b>Data Storage</b>	Standard 2000 Pcs, Sample 20000 Pcs
<b>Language</b>	English, Chinese
<b>Operating Environment</b>	0 ~ 40°C, 0 ~ 85%RH (no condensing), Altitude < 2000m
<b>Storage Environment</b>	-20 ~ 50°C, 0 ~ 85%RH (no condensing)
<b>Standard Accessory</b>	Power Adapter, Built-In Li-ion Battery, User Guide, PC Software, White and Black Calibration Cavity, Dust Cover

