

STALWART

Handheld Spectrophotometer ST-301



Introduction

ST-301 handheld spectrophotometer features only 8mm single aperture. Both SCI and SCE mode makes it widely use in many applications. High accuracy let Stalwart spectrophotometer better suitable for color matching system for better color measurement and color formula use.

ST-301 Handheld Spectrophotometer

4 Illuminants, 8mm Aperture, SCI&SCE, Good Precision. Comply with CIE No.15, ISO7724/1, ASTM E1164, DIN5033 Teil7, ST-301 color spectrophotometer features only 8mm single aperture. Both SCI and SCE mode makes it widely use in many applications. It has high accuracy 0.06 based on white calibration plate measured 30 times at 5 seconds intervals after white calibration was performed.

Features

- Perfect combination of beautiful appearance and the human body mechanics structural design.
- D/8 geometrical optics, conforms with CIE No. 15, ISO7724/1, ASTM E1164, DIN5033 Teil7.
- Use long life and low power consumption combined LED light source.
- Single 8mm aperture, 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.
- High electronic hardware configuration: 3.5-inch TFT color LCD, Capacitive Touch Screen, concave grating, 256 image Element Double Arrays CMOS Image Sensor.
- USB port.
- Super stain-resistant and stable standard white calibration plate
- Large capacity storage space, over 20,000 measurement data
- Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data, meet a variety of customers' demand for color measurement.
- Camera Locating Function, better position.
- PC software has a powerful function extension.

Specification

| Item | ST-301 |
|------------------------------------|---|
| 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 |
| Semi band Width | 10nm |
| Measured Reflectance Range | 0-200% |
| Measuring Aperture Single Aperture | 8mm/10mm |
| Specular Component | SCI &SCE Color Space CIE Lab, XYZ,Yxy, LCh, CIE LUV, LAB |
| Color Difference Formula | ΔE^*ab , ΔE^*uv , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$, ΔE^*00v , ΔE |

Specification

| | |
|--------------------------|---|
| Other Colorimetric Index | WI(ASTM E313, CIE/ISO, AATCC),YI(ASTM D1925,ASTM 313), TI(ASTM E313, CIE/ISO), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity, 8° Glossiness |
| Observer Angle | 2°/10° |
| Illuminant | D65, A, C, D50 |
| Displayed Data | Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset |
| Measuring Time | 2.6s |
| Repeatability | MAV/SCI: $\Delta E^* \leq 0.06$ |
| Inter-instrument Error | MAV/SCI: $\Delta E^* \leq 0.4$ |
| Measurement Mode | Single Measurement, Average Measurement |
| Locating Method | Camera View Finder 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 |
| Data Storage | Standard 2000 Pcs, Sample 20000 Pcs |
| Language | English |
| 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 |

Application

Stalwart handheld spectrophotometer can easily achieve color transferring, and be used as a precision instrument for color matching system. It's widely used in plastics, electronics, painting, ink, textile and garment, printing and dyeing, printing paper, automove, medical, cosmetics and food industries, scientific research Institutes, schools and laboratories



Accessories



Powder Test Box



Calibration Plate



8mm Extended Measuring Aperture



Micro Printer