

# Spectro - TS3770

## Handheld Grating Spectrophotometer



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**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

## ►► Product Features:

1. D/8 geometric optical structure, conforming to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO 7724/1, ASTM E1164, DIN 5033 Teil 7;
2. Adopt combined LED light source with high life and low power consumption, including UV/excluding UV;
3. Switchable 8mm & 4mm aperture (the flat/tip measuring aperture can be switched easily, which is suitable for more tested sample)
4. Dual optical path system, the optical resolution in the visible range is less than 10nm, which can measure the Sd and SCE spectrum of the sample at the same time;
5. Accurate spectrum and lab data, used for color matching and accurate color transmission;
6. High hardware configuration: 3.5-inch TFT true color screen, capacitive touch screen, 1000 line blazed grating, silicon photocell array detector with large photosensitive area, etc;
7. USB/Bluetooth dual communication mode, wider adaptability;
8. Super dirt resistant and stable standard white calibration board;
9. Large capacity storage space, which can store more than 30,000 pieces of test data;
10. 2°/10° standard observer's angle, multiple light source modes, multiple surface color systems, meet various standards of chromaticity indicators, and the needs of various customers for color measurement;
11. Camera locating position and Stabilizer cross measurement position;
12. PC software has powerful function expansion;



## ►► Application Industry:

It is widely used in plastics, electronics, paints and inks, textile and garment printing and dyeing, printing paper, automotive, medical, cosmetics and food industries, scientific research institutions and laboratories. The instrument can accurately measure multiple color indices such as reflection spectrum in multiple color spaces. With this instrument, research on color matching, color management, etc. can be easily performed, and precise product quality management control can also be performed. The instrument is equipped with high-end color management software, which can be connected to a computer for more functions.



## ►► Specifications Parameter:

**Model:** TS3700

**Optical Geometry:** Reflect:  $d_i: 8^\circ$ ,  $d_e: 8^\circ$  (diffused illumination, 8-degree viewing angle) SCI (specular component included)/SCE (specular component excluded); Include UV/ excluded UV light source Conforms to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724-1, ASTM E1164, DIN5033 Teil7

**Characteristic:** double apertures for accurate color analysis and transmission in laboratory It is used for precise color measurement and quality control in plastic electronics, paint and ink, textile and garment printing and dyeing, printing, ceramics and other industries, and for fluorescent sample measurement.

**Integrating Sphere Size:**  $\phi 40\text{mm}$

**Light Source:** Combined full spectrum LED light source, UV light source Spectrophotometric

**Mode:** Flat Grating

**Sensor:** Silicon photodiode array (double row 40 groups)

**Wavelength Range:** 400-700nm

**Wavelength Interval:** 10nm

**Semiband Width:** 10nm

**Measured Reflectance Range:** 0-200%

**Measuring Aperture:** MAV: $\phi 8\text{mm}/\phi 10\text{mm}$ ; SAV: $\phi 4\text{mm}/\phi 5\text{mm}$

**Specular Component:** SCI&SCE

**Color Space:** CIE LAB, XYZ, Yxy, LCh, CIE LUV, s-RGB, HunterLab,  $\beta_{xy}$ , DIN Lab99 Munsell(C/2)

**Color Difference Formula:**  $\Delta E^*_{ab}$ ,  $\Delta E^*_{uv}$ ,  $\Delta E^*_{94}$ ,  $\Delta E^*_{cmc}(2:1)$ ,  $\Delta E^*_{cmc}(1:1)$ ,  $\Delta E^*_{OO}$ , DIN  $\Delta E_{99}$ ,  $\Delta E$ (Hunter)

**Other Colorimetric Index:** WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM 01925, ASTM 313), Metamerism Index MI, Staining Fastness, Color Fastness, Color Strength, Opacity,  $8^\circ$  Glossiness, 555 tone classification

**Observer Angle:**  $2^\circ / 10^\circ$

**Illuminant:** D65,A,C, D50, D55, D75, Fl, F2( CWF), F3,F4, FS, F6, F7( DLF), F8, F9, F10(TP LS), F11(TL84), F12(TL83/U30)

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

**Measuring Time:** About 1.5s (Measure SCI & SCE about 3.2s)

**Repeatability:** Spectral reflectance: MAV/SCI, Standard deviation within 0.08% (400 nm to 700 nm: within 0.18%)

**Chromaticity value:** MAV/SCI, within  $\Delta E^*ab$  0.02 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration)

**Inter-instrument Error:** MAV/SCI, Within  $LIE^*ab$  0.15(Average for 12 BCRA Series II color tiles)

**Measurement Mode:** Single Measurement,Average Measurement(2-99times)

**Locating Method:** Camera Locating,stabilizercross position

**Dimension:** L\*W\*H=129X76X217mm

**Weight:** Approx 600g

**Battery:** Battery: Li-ion battery, 3.7v, 5000mAh, 6000 measurements within 8 hours

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

**Displayed Data:** 3.5-inch TFT color LCD, Capacitive Touch Screen

**Data Port:** USB, Bluetooth 4.2

**Data Storage:** Standard 1000 Pcs, Sample 30000 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, User Guide, PC Software(Download from office website), USB cable, White and Black Calibration Cavity, Protective Cover, Wrist strap, 8mm flat aperture, 8mm tip aperture, 4mm flat aperture, 4mm tip aperture

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

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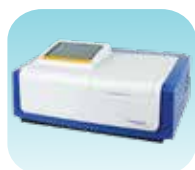
**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



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Optical Emission  
Spectrophotometer



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Analyzer



Micro Plate  
Reader/Washer



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Urine Analyzer



Total Organic  
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Water purification  
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3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## Reach us @



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