Lovibond® Colour Measurement

Tintometer® Group

TR 520 Spectrophotometer

Ergonomic Reflectance Meter with Dual Aperture: 10mm/8mm & 5mm/4mm

- Intuitive On-board Icon-based Software
- Allows you to Measure Large or Small Area Views with Easy Interchangeability
- Free OnShade PC-based Software for Graphs and Statistical Process Control
- Fluorescent Materials can be Measured with UV In and UV Out

Part Number: 403035

Suitable for Use Over Prolonged Periods

The TR 520 has been designed with ergonomic features making it easy to handle during prolonged use.

Latest Technology Facilitates Use

Measurements are further facilitated with touch screen technology and the intuitive on-board icon-based software which guides you to customise your instrument including, but not limited to: select your language option (English, French, German, Spanish, Portuguese or Chinese); chose between right handed or left handed operation; switch light source and colour space. The on-screen interface also guides you through the process of sample measurement and data management.

Enhanced Flexibility

Flexibility is also enhanced with the instrument's dual aperture (10mm/8mm & 5mm/4mm), making it easy to measure small and large area views, and accessories for most applications including powders, liquids, gels, pastes, granules and solid materials. Fluorescent materials can be measured with UV In and UV Out.

Repeatable, Stable Results

To ensure you can easily see what you are measuring for repeatable, stable results, the TR 520 incorporates an on-board camera-based locator.

View Results On-Screen or On PC

As standard, the TR 520 is supplied with a free copy of OnShade software to view the results on a PC (via USB cable) and develop graphs, statistical process control, shade searching and all available Colour, Space, Colour Differences and Indices which can be shared or printed (via the optional mico printer accessory).

Guaranteed Calibration

White and black calibration tiles are, naturally, included with the instrument. It is recommended to re-calibrate every 24 hours minimum.

Suitable for Multiple Applications

The TR 520 reports CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter Lab colour spaces, ΔE*L*a*b*, ΔE*C*h°, ΔE*uv, ΔE*94, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00, ΔE Hunter Colour Difference Formulars; and can be set to D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12 illuminants.
In addition, the TR 520 can report a wide selection of other Colorimetric Index's: WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), TI (ASTM, E313, CIE/ISO), Metamerism Index (MI), Colour stain, Colour Fastness, Colour Strength and Opacity. This data is displayed as Spectral Value/ Graph, Colorimetric Value, Colour Difference Value/ Graph, PASS/FAIL Result, Colour Offset or Samples Chromaticity values.

TR 520 Spectrophotometer

An ergonomic, flexible reflectance spectrophotometer with easily selectable apertures of 10mm/8mm & 5mm/4mm. Touch screen technology with intuitive icons to enable user-specific settings and guide through the measurement process. An on-board camera-based locator and black and white calibration plates ensure accurate measurements and results every time. Multi language support for international use.

Technical Data

Colour Type	Opaque
Optical Geometry	Reflect: di: 8°, de: 8° (diffused illumination, 8 degree viewing angle)
Integrating Sphere Size	48 mm
Spectrophotometric Mode	Concave Grating
Sensor	256 image Element Double Array CMOS Image Sensor
Display	3.5 inch TFT colour LCD, Capacitive Touch Screen
Interfaces	USB
Spectral Interval	10 nm
External Storage	2000 Standards : 20000 Samples
Measurement Mode	Single Measurement, Average Measurement
Power Supply	Li-ion Battery
Battery Life Time	5000 measurements with 8 hours
Location Method	Camera View Finder Locating
Measured Reflectance Range	0 - 200 %
Measurement Time	2.6 s
Measuring Aperture	Dual Aperture: 10mm/8mm & 5mm/4mm
Specular Component	SCI & SCE
Colour Difference Formular	ΔE*ab, ΔE*uv, ΔE*94, ΔE*cmc (2:1), ΔE*cmc (1:1), ΔE*00v, ΔE (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, Colour Fastness, Colour Strength, Opacity
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Colour Difference Values/Graph, PASS/FAIL Result, Colour Offset
Inter Instrument Agreement	MAV/SCI: ΔE* ≤0.15
Spectral Range	400 - 700 nm
Bandwidth	10 nm
Repeatability	MAV/SCI: ΔE* ≤0.03
Illuminants	CIE Illuminant D65 CIE Illuminant A CIE Illuminant C CIE Illuminant D50 CIE Illuminant D55 CIE Illuminant D75 CIE Illuminant F1 CIE Illuminant F2 CIE Illuminant F3 CIE Illuminant F4 CIE Illuminant F5 CIE Illuminant F6 CIE Illuminant F7 CIE Illuminant F8 CIE Illuminant F9 CIE Illuminant F10 CIE Illuminant F11 CIE Illuminant F12
Portability	Portable
Illuminant Life Span	5 years, more than 3 million measurements
Observer	2° / 10°
Environmental Conditions	0 - 40 °C, 0 - 85 % Relative Humidity (non condensing), Altitude < 2000 m
Stock Conditions	-20 - 50 °C, 0 - 85 % Relative Humidity (non condensing)
Languages User Interface	English, German, French, Spanish, Portuguese, Chinese
Dimensions	184 x 105 x 77 mm
Weight	600 g

Delivery Scope

- TR 520 Handheld, Sphere Spectrophotometer
- OnShade PC Software
- White and Black Calibration Board (white tile and black port)
- Dust Cover
- USB Cable
- External DC Power Supply
- USB Stick with User Manuals in English, French, German, Spanish, Portuguese and Chinese
- Sturdy Carrying Case

Optional Accessory

- Micro printer (to be purchased separately)

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