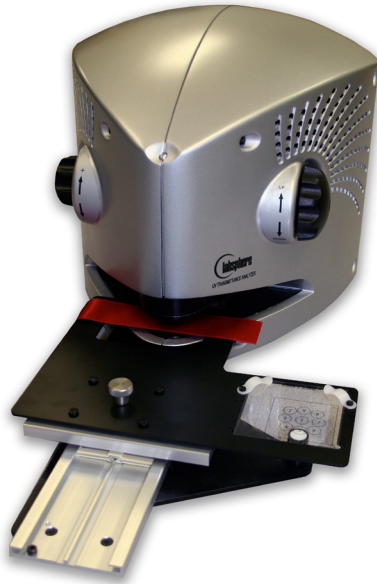


UV-2000F ULTRAVIOLET TRANSMITTANCE ANALYZER

Instantaneous
UPF Protection
Factor Values
of Fabric/Textile
Samples



ADVANCED

Labsphere's UV-2000F incorporates the latest component and software technology into an industry proven system architecture, to achieve accurate UPF, critical wavelength and UVA:UVB ratio of fabric samples. Driven by rapidly evolving industry requirements to simplify research & development or quality control for fabric samples, the UV-2000F is designed to comply with recently approved testing methods such as AS/NZS 4399:1996, EN 13758-1:2002, AATCC 183:2004, GB/T18830:2009 and Japan Garment Association standard. The UV-2000F has replaced Labsphere's UV-1000F as the industry's choice for not only laboratory UPF analysis, but also production floor quality control.

FAST

The UV-2000F rapidly measures the diffuse transmittance of textile samples in the ultraviolet wavelength region from 250 - 450 nm. Labsphere's Spectralon® integrating sphere incorporates a re-optimized xenon flash lamp to provide exceptional diffuse illumination of the product sample and minimize data integration time. New high performance diode array spectrometers coupled by new advanced fiber optics are optimized at the system level for low stray light with superior wavelength stability and flash-to-flash repeatability.

IMPROVED

Many improvements are incorporated in the UV-2000F to realize a new industry de facto standard. System improvements include new spectrometers, xenon flash lamp, optical coupling fibers, optical head positioning mechanism, sample positioning stage and a new, robust software development platform.

The diode array spectrometers feature stable, custom concave diffractive optics for measurement integrity and repeatability, original holographic diffraction gratings (not replicated gratings) peaked for higher efficiency across the wavelength range, and longer pixel arrays for better pixel wavelength resolution. Illumination is filtered at the integrating sphere to limit total exposure at the sample and to improve stray light performance.

FEATURES

One-touch sample analysis; sample scans within five seconds

Automatic calculations of spectral transmittance, UPF, critical wavelength and UVA:UVB ratios

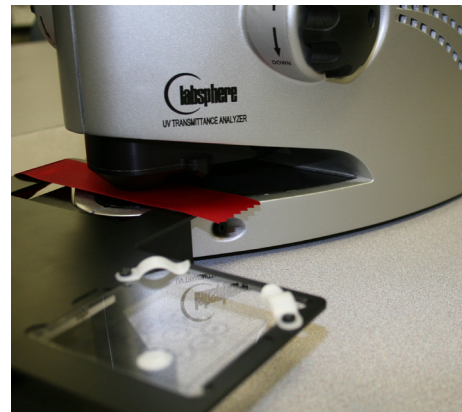
Performance validation routine

Automatic calculations of UPF parameters per AS/NZS 4399:1996, EN 13758-1:2002, AATCC 183:2004, GB/T18830:2009, Japan Garment Association standard, and user defined methods

A higher flash rate reduces exposure time, minimizing dark current and maximizing dynamic range. Use of solarization resistant fibers maintains high system throughput over time. Longer fibers filter high order modes to provide cleaner grating illumination improving stray light performance.

New capabilities of the UV-2000F include the following:

- Compact bench top footprint
- Wavelength accuracy to +/- 1 nm
- Measurement area 0.67 cm²
- Dynamic range extension up to 2.7 AU
- Auto flash capability
- USB computer interface
- UVA:UVB ratio
- Manually operated UV-2000F sample stage assembly

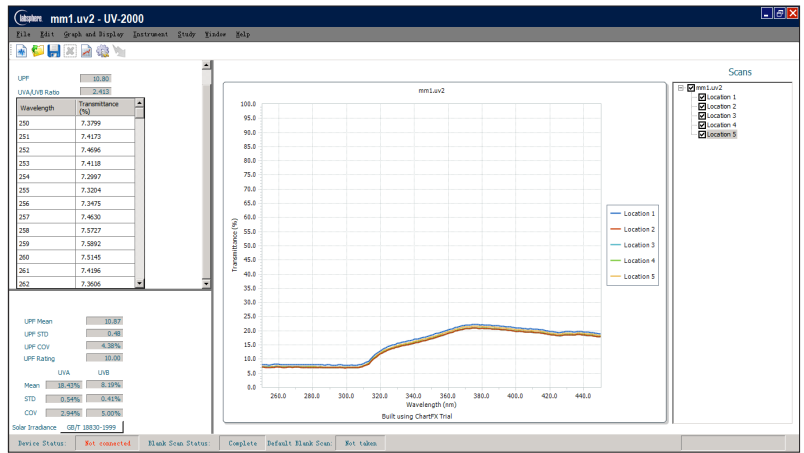


EASY-TO-OPERATE

A built-in report function generates essential information at the click of a button. Reports include necessary information such as date, time, operator name, sample identification, and test parameters. Reports are conveniently viewed on a PC, printed, or exported as text to data processing software for further review and analysis.

POWERFUL APPLICATION SOFTWARE

UV-2000F software features different measurement methods for UPF testing of fabric samples including the AS/NZS 4399:1996, EN 13758-1:2002, AATCC 183:2004, GB/T18830:2009, Japan Garment Association standard, and user defined methods. This easy to use Windows XP and Windows 7 compatible software facilitates capture/archival/retrieval and export of all data for various textile samples. UV-2000F application software includes an integrated Performance Validation Routine that allows for on-site validation and re-validation to ensure optimum instrument performance. A set of calibrated standards, including a wavelength standard that captures six relevant spectral bands, is included with each UV Transmittance Analyzer.



Specifications

Included Model Name

UV-2000F

which includes software, sample stage, and validation kit

Order Number

AA-00909-100

System Properties and Performance

Wavelength Range:

250 to 450 nm*

Wavelength Accuracy:

±1 nm

Bandwidth: (FWHM)

<4 nm

Wavelength Step: (Data Interval)

1 nm

Optical Geometry:

Hemispherical Illumination/0° viewing (d/0)

Integrating Sphere Geometry:

Spectralon®

Integrating Sphere Port Area:

< 5%

Sample Exposure Area:

0.79 cm²

Lamp:

Xenon Flash Lamp

UV Dose Per Measurement Cycle:

< 0.2 J/cm²

Sample Positioning Stage:

Manual Stage

Measurement Range:

Transmittance:

0 - 100%

Absorbance:

0 - 2.7 A (Dual Doped PMMA Method)

Scan Time:

<5 s

Measurement Methods Supported:

AS/NZS 4399:1996, EN 13758-1:2002

AATCC 183:2004, GB/T18830:2009

Japan Garment Association standard,

and User-defined methods also supported

Computer Interface:

USB

Minimum Computer Requirements:

1.6 GHz processor, Windows®XP or Vista

SVGA 800 x 600

256MB RAM, 400MB free disk space

110 - 120/220 - 240 VAC, 60/50 Hz

0° - 50°C, 0% - 70% RH (non-condensing)

Power Requirements:

Operating Environment:

Dimensions:

With Stage:

11H x 22.6D x 12.3W In (27.9H x 56.6D x 31.2W cm)

Without Stage:

11H x 12.6D x 12.3W in (27.9H 32.0D x 31.2W cm)

* All system specifications are based on a wavelength range of 290 to 400 nm.

 SphereOptics

Phone +49 7556 966 562-0

Fax +49 7556 966 562-22

E-Mail info@sphereoptics.de

www.sphereoptics.de