UV-2000F ULTRAVIOLET TRANSMITTANCE ANALYZER

Instantaneous UPF Protection Factor Values of Fabric/Textile Samples

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

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.

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.

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Specifications

Included Model Name: UV-2000F
Order Number: AA-00909-100
which includes software, sample stage, and validation kit

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)
- Spectralon®
- < 5%
- Xenon Flash Lamp
- < 0.2 J/cm²
- Manual Stage

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:
- Japan Garment Association standard
- 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

Power Requirements:
- 110 - 120/220 - 240 VAC, 60/50 Hz
- 0° - 50°C, 0% - 70% RH (non-condensing)

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 x 32.0D x 31.2W cm)

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