

UV-2000F Ultraviolet Transmittance Analyzer

Achieve 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 and development or quality control for fabric samples, the UV-2000F is designed to comply with recently approved testing methods such as AS/NZS 4399:2017, EN 13758-1:2007, AATCC 183:2014, GB/T18830:2009, Japan Garment Association standard and Japanese Industrial Standards (JIS). 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.

Value

- 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 AATCC 183:2020, AS/NZS 4399:1996, AS/NZS 4399:2017, AS 4399:2020, EN 13758-1:2007, GB/T18830:2009, Japan Garment Association Standard, JIS L 1925:2019, and user defined methods

Features of the UV-2000F include:

- 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

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.

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.

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.

