FBPI Optical Fiber

Polymicro Technologies, a subsidiary of Molex Incorporated, has successfully developed a broad spectrum optical fiber with a low -OH pure silica core that demonstrates significantly reduced content of UV defects and other UV absorption centers. Polymicro's proprietary FBPI fiber leverages the benefits and mitigates the limitations of standard optical fibers. Featuring improved transmission properties over a much wider spectral range, the silica-based, broadband FBPI fiber is available in a range of densities and can be produced in core diameters from 50-600 µm.

"Optimized for panoramic spectroscopy and sensor analysis our new broad spectrum FBPI fiber represents an industry first," states Robert Dauphinais, business development manager, Polymicro Technologies. "FBPI fiber delivers superior performance coupled with resistance to radiation and exposure that can lead to fiber degradation and shorten product life."

In the near-infrared (NIR) wavelength region to beyond 2100 nm, Polymicro FBPI fiber attenuation is equivalent to standard NIR fibers having a low -OH silica core and F-doped cladding. Comparable to solarization properties of standard UV optimized high -OH fibers with high radiation resistance, FBPI fiber features ultra-

violet (UV) transmission down to 200 nm.

Many spectroscopic applications require high performance optical fibers that transmit light over a broad spectrum and demonstrate minimal focal ratio degradation. Unlike standard optical fibers which are limited by transmission spectral range, Polymicro FBPI optical fiber transmits a wider range of wavelengths with relative uniformity across the wavelength range.

“FBPI fiber handles both UV and NIR in a broader spectrum of wavelengths than any other optical fiber on the market today. This is particularly advantageous in expanding the spectroscopic measurement range and sensitivity of a device,” adds Dauphinais.

FBPI broadband optical fiber is designed for a range of high performance spectroscopy applications, including optical fiber testing, environmental monitoring, gas phase measurements, precision surgical and industrial lasers and high performance gas or liquid chromatography.

Molex Incorporated
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