Bend Insensitive PM Telco Fibers - Optimized For Small Packaging Applications

Nufern Polarization Maintaining Fibers

Largest family of Polarization Maintaining Passive, Active and Sensor fibers

Nufern's NuPANDA polarization maintaining fibers are available in telecom, radiation resistant gyroscope, coupler, short wavelength, pure silica core, rare earth doped, and multi-clad varieties. These fibers can be supplied in form factors from 80 up to 400 µm depending upon the configuration. They are available in bend insensitive versions from 980 to 1550 nm and are ideally suited for small package applications required in today's network components and devices. NuPANDA fibers incorporate the best attributes of single-mode fiber manufacturing, which lends itself to lower cost through large scale production. This facilitates the highest possible proof stress strength and fatigue failure resistance along with extremely uniform optical and mechanical properties.



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Optical Benefits

- NuPANDA fibers offer a broad operating wavelength range combined with low intrinsic attenuation and high mode field uniformity
- Custom and precision beat length selection are intrinsic to this technology
- Bend insensitive versions maintain PER performance under bent conditions common in today's high integration and small form factor devices
- No stress inducing dopants are located within the evanescent field thus making standard NuPANDA intrinsically radiation resistant with radiation performance in the range of 0.1dB/km-kRad



Birefringence & Beat Length vs Normalized Stress Rod Diameter



Mechanical Benefits

- NuPanda fibers have an intrinsically high tensile strength and fatigue failure tolerance which makes them ideal for coiling applications
- · Bend insensitive versions offer superior low-loss bending performance and are designed for the reduced package size of today's networks
- Stress rods are convenient orientation markers used by splicing machines to allow quick precision orientation



Typical Applications

- NuPANDA fibers are suitable for an extensive range of spectroscopic applications in space, terrestrial, and undersea environments and across a very wide range of wavelengths
- NuPANDA pigtails have a myriad of uses in telecom environments, particularly for pump stabilized 980 nm sources
- NuPANDA fibers are qualified for optical gyroscopes as both polarizers and depolarizers as well as the Sagnac interferometer coils themselves
- NuPANDA fibers are used in Single Polarization laser beam delivery applications including harmonic generation technology

Polarization extinction ratio of bend insensitive PM fibers under bent condition. (10 turns at 25 mm diameter) 60 PER - 10 turns at 25 mm diameter 55 Lower Spec Limit (30 dB) 50 44.7 43.9 42.5 43.7 କ୍ରି **45** 40 35 30 PM980B-XP PM1300B-XP PM14XXB-XP PM1550B-XP **Powered by Nufern**

- Toll-free help line: 1-888-NU-HELPS
- Commitment to R&D, our customers and our community.
- Comprehensive IP and patent portfolio



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