

NUPANDA™



It's what's *inside*
that counts.



Nuferm Polarization Maintaining Fibers

Largest family of Polarization Maintaining Passive, Active and Sensor fibers

Nuferm's NuPANDA polarization maintaining fibers are available in telecom, rad-resistant gyroscope, coupler, short wavelength, pure silica core, rare earth doped, and multiclad varieties. These fibers can be supplied in form factors from 80 up to 400 μm depending upon the configuration. 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.



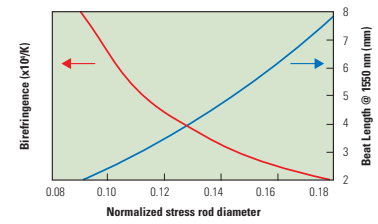
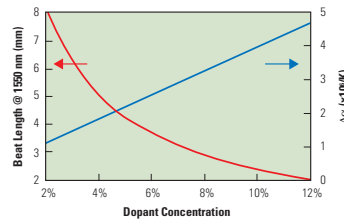
www.nuferm.com

The Nuferm Families of Products

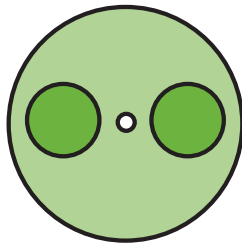
NuLASER | NuAMP | NuSUB | NuPOWER | EYE SAFE | NuPANDA | NuWIRE | NuCOMM

Performance Superiority

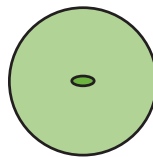
The NuPANDA construction methodology allows the independent control of the optical core, the stress rod size, location and composition. These four independent variables absolutely dictate the performance superiority of NuPANDA over all competing technologies.



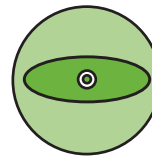
Polarization Maintaining Fiber Varieties



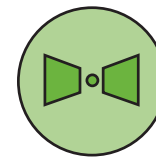
PANDA
Excellent optical properties. Excellent uniformity over length



Elliptical Core
Rudimentary optical properties



Elliptical Clad
Reasonable optical properties. Poor uniformity over length

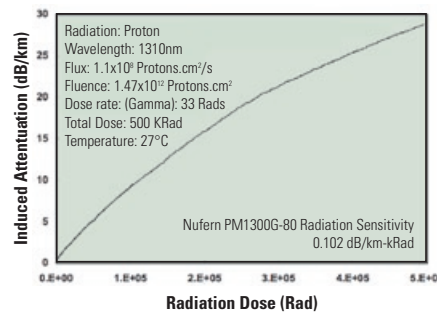


Bow-Tie
Reasonable optical properties. Poor uniformity over length

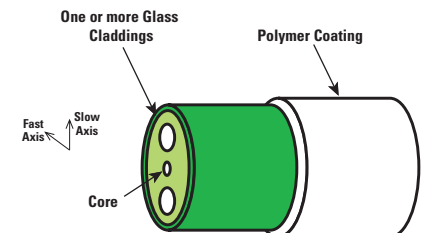
Key Attributes

Several key attributes of NuPANDA Polarization Maintaining fiber enhance its usefulness and superiority over other PM technologies in real world applications.

Radiation Performance: Because the optical core is manufactured independently of the stress rods it can be made with high chemical purity, either as germanium-doped or pure silica core. This allows for an intrinsic radiation performance benefit not inherent in the best radiation resistant PM fibers made with competing technologies.



Data Courtesy: Light Ion Radiation Lab, Berkeley, CA; Joe Frieble.



Alignment: Stress rods are inserted into circular holes drilled into the pristine preform. As such splicing and coupling can be done with a high degree of accuracy with closer tolerance and greater repeatability than fibers made with other designs. This ensures lower splice loss and higher extinction ratios.

Polishing: Many applications require the termination of a PM fiber. To ensure good optical performance the core, clad and stress area must accept a proper polish. NuPANDA fiber can be polished to a higher degree of uniformity without risk of damage.

Coiling: Many sensor applications require that the PM fiber is tightly and compactly coiled. The consistency of NuPANDA fiber over length is unsurpassed and so can form more uniform coils than previously achievable. Additionally, the absence of low strength breaks results in the longest life expectancy in deployment versus any other competing technology.

