

NUWIRE™



Plane Thinking **AMPLIFIED**

Extreme Duty, Bend Insensitive, &/or Rad Hard Communication & Sensor

Nufern has used its experience in the supply of aerospace, military, and industrial fibers to create a new family of fibers designed to be more "wire like" than previously thought possible. NuWIRE fibers are designed to have long life (22 year design) and deliver outstanding performance in applications where temperature changes are extreme and rapid, and where shock, stress and vibration are routine. NuWIRE can be deployed in applications with an elevated risk of chemical attack from organic and inorganic solvents. Many of the NuWIRE products are designed to operate with the same service life in spite of long term or highest level ionizing radiation exposure.

Extreme Radiation Hardened S1550 products are US Department of Commerce controlled.



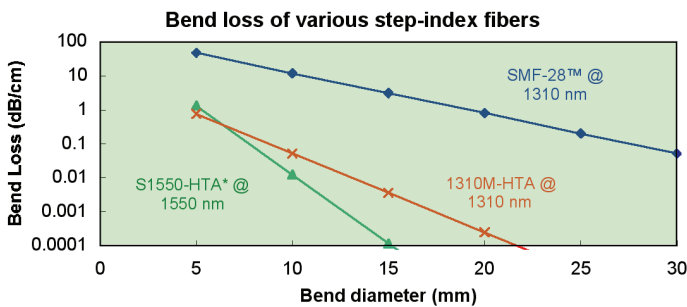
www.nufern.com



Optical Attributes

- Family of SM and MM bend insensitive high NA fibers
- Immune to effects of H₂ ingress

Bend loss vs. Bend Diameter



Applications

- Aircraft and spacecraft LANS
- Aircraft and spacecraft sensors
- Submarine environment deployments
- Environments subject to EMP radiation at any level
- Extreme radiation hard versions are subject to export control under the Dept. of Commerce Export Administration Regulations

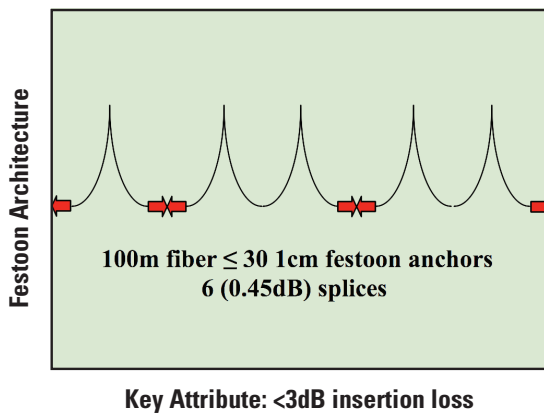
Selection of Robust Fibers

| | | |
|--|-----------------|---|
| 50/125 | 62.5/125 | 100/140 <i>Rad Resistant</i> |
| 19/125 <i>Extreme Rad Hard Silica Core</i> | | 7/125 <i>Bend Insensitive</i> |

Mechanical Attributes

- Very high strength, high n value (typically 22→28)
- Available in HTA, Silicone, or Polyimide coatings
- Capable of surviving in festoon deployments (1 cm Ø anchors)

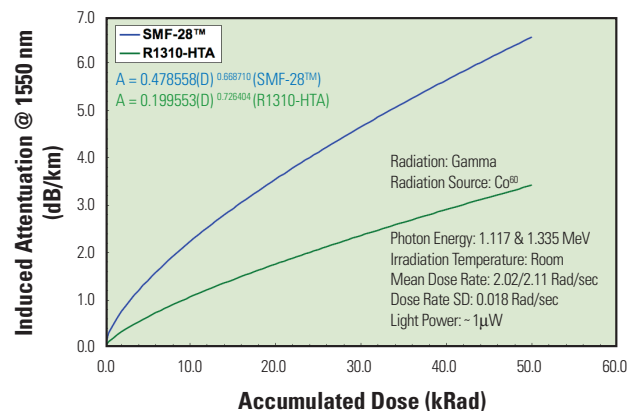
Festoon Architecture



Radiation Environment

- All SM fibers in this series are suitable for deployment in radiation environments including LEO and GEO (typ. < 3dB/km induced loss with 500 kRAD accumulated dose)
- SM versions additionally tolerant of FX-Ray at very high levels

Induced Loss vs. Accumulated Dose



SMF-28 is a trademark of Corning, Inc.