

Specialty Multi-Mode Fibers



Nufern's specialty multi-mode fibers are ideal for a variety of diverse applications. They are capable of withstanding extreme environments and large temperature swings. Features include step index and graded index configurations, numerical apertures from 0.06 to 0.45 and core sizes from 10 μm to 700 μm . All fibers are available with a high temperature acrylate, silicone, or polyimide coating.

Typical Applications

- Telecom FDDI, FTTH, etc.
- Optical pump & beam delivery
- Robust duty in extreme environments
- CATV and data comm.

Features & Benefits

- Operate over wide frequency range — One fiber serves broad applications
- Exceptional uniformity and core/clad concentricity — Minimize fiber induced signal artifacts
- Higher proof test levels — Longest life expectancy
- Tight diameter control — Lowest cost deployments

Optical Specifications

Operating Wavelength
Core NA
Bandwidth
Core Attenuation

GI-50/125-S

800 – 1350 nm
 0.200 ± 0.015
 $\geq 500 \text{ MHz-km @ } 850 \text{ nm}$
 $\geq 500 \text{ MHz-km @ } 1300 \text{ nm}$
 $\leq 1.5 \text{ dB/km @ } 1300 \text{ nm}$
 $\leq 4.0 \text{ dB/km @ } 850 \text{ nm}$

GI-62.5/125-S

800 – 1350 nm
 0.275 ± 0.015
 $\geq 160 \text{ MHz-km @ } 850 \text{ nm}$
 $\geq 500 \text{ MHz-km @ } 1300 \text{ nm}$
 $\leq 0.9 \text{ dB/km @ } 1300 \text{ nm}$
 $\leq 3.0 \text{ dB/km @ } 850 \text{ nm}$

GI-100/140-P

800 – 1350 nm
 0.290 ± 0.020
 $\geq 100 \text{ MHz-km @ } 850 \text{ nm}$
 $\geq 100 \text{ MHz-km @ } 1300 \text{ nm}$
 $\leq 3.0 \text{ dB/km @ } 1300 \text{ nm}$
 $\leq 5.0 \text{ dB/km @ } 850 \text{ nm}$

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Core/Clad Offset
Core Index Profile
Coating Material
Operating Temperature Range
Short Term Bend Radius
Long Term Bend Radius
Proof test Level

$125.0 \pm 2.0 \mu\text{m}$
 $50.0 \pm 3.0 \mu\text{m}$
 $250.0 \pm 20.0 \mu\text{m}$
 $\leq 3.00 \mu\text{m}$
Graded Index
Thermally Cured Silicone
-65 to 200 °C
 $\geq 12 \text{ mm}$
 $\geq 25 \text{ mm}$
 $\geq 100 \text{ kpsi (0.7 GN/m}^2\text{)}$

$125.0 \pm 2.0 \mu\text{m}$
 $62.5 \pm 3.0 \mu\text{m}$
 $250.0 \pm 20.0 \mu\text{m}$
 $\leq 3.00 \mu\text{m}$
Graded Index
Thermally Cured Silicone
-65 to 200 °C
 $\geq 12 \text{ mm}$
 $\geq 25 \text{ mm}$
 $\geq 100 \text{ kpsi (0.7 GN/m}^2\text{)}$

$140.0 \pm 3.0 \mu\text{m}$
 $100.0 \pm 3.0 \mu\text{m}$
 $172.0 \pm 2.0 \mu\text{m}$
 $\leq 5.00 \mu\text{m}$
Graded Index
Thermally Cured Polyimide
-65 to 300 °C
 $\geq 7 \text{ mm}$
 $\geq 15 \text{ mm}$
 $\geq 200 \text{ kpsi (1.4 GN/m}^2\text{)}$



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Standard specifications and design parameters are listed above. Specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Nufern can assist with your requirements.

