Planar Waveguide Single-Mode Fiber

Nufern extra high-performance Planar Waveguide Fiber is part of the NuBRIDGE™ fiber family and provides a solution to the splicing challenges for high NA waveguiding structures. Industry developments indicate the call out for easy interfacing of new planar waveguide (PWG) technology with existing fiber infrastructures. Planar Waveguide Fiber is an excellent bridge fiber between high NA planar waveguides and low NA transmission fiber. This fiber allows outstanding optical coupling with planar waveguides. In addition, the composition of PWG1-XP is tailored to thermally expand the core during splicing and thus achieve low splice loss to transmission fibers.

Typical Applications

- Fibertails for Planar Waveguides
- Bridge Fiber
- Silicon photonics devices

Features & Benefits

- High numerical aperture — Bend insensitive fiber for miniature packages
- Thermally expandable core — Low splice loss to transmission fiber
- Small Mode Field Diameter — High coupling efficiency with Planar Waveguides

Optical Specifications	**PWG1-XP**
Operating Wavelength	1350 – 1600 nm
Core NA	0.260
Mode Field Diameter	4.8 ± 0.5 µm @ 1550 nm
Cutoff	1330 ± 50 nm
Geometrical & Mechanical Specifications	
Cladding Diameter	125.0 ± 0.5 µm
Core Diameter	3.7 µm
Coating Diameter	245.0 ± 10.0 µm
Coating Concentricity	< 5.0 µm
Core/Clad Offset	≤ 0.30 µm
Coating Material	UV Cured, Dual Acrylate
Operating Temperature Range	-55 to 85 °C
Short Term Bend Radius	≥ 6 mm
Long Term Bend Radius	≥ 13 mm
Prooftest Level	≥ 200 kpsi (1.4 GN/m²)

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RoHS

Custom developed fiber (FUD) 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.