5/130 Ytterbium-Doped Double-Clad Fiber

Nufern's general purpose Ytterbium-Doped Double-Clad Fiber is available in two-versions — PANDA-style, polarization-maintaining (PM) and non-PM. Designed specifically for CW applications around 1-15 W, these fibers are ideal for applications requiring low-cost fiber laser and amplifier source, such as laser marking, fiber amplifier pumps and IR sources for frequency doubling. These fibers' telecom-type geometrics are compatible with readily available low-cost pump diodes and fiber-based components.

Typical Applications

- Laser marking
- Fiber amplifier pumps
- IR sources for frequency doubling

Features & Benefits

- NuCOAT™ fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Low cost double-clad technology — Enables use of high power multimode pump diodes
- Single-mode output — Compatiable with standard telecom 980/1060 nm fiber-based components
- PANDA-style stress structure — Linearly polarized output for frequency conversion

Optical Specifications	**PM-YDF-5/130-VIII**	**SM-YDF-5/130-VIII**
Operating Wavelength	1060 – 1115 nm	1060 – 1115 nm
Core NA	0.120	0.120
First Cladding NA (5%)	≥ 0.46	≥ 0.46
Mode Field Diameter	6.5 ± 0.5 µm @ 1060 nm	6.5 ± 0.5 µm @ 1060 nm
Cutoff	950 ± 50 nm	950 ± 50 nm
Core Attenuation	≤ 15.0 dB/km @ 1200 nm	≤ 10.0 dB/km @ 1200 nm
Cladding Attenuation	≤ 15.0 dB/km @ 1095 nm	≤ 15.0 dB/km @ 1095 nm
Cladding Absorption	0.60 ± 0.10 dB/m at 915 nm 1.80 dB/m near 975 nm	0.55 ± 0.10 dB/m at 915 nm 1.65 dB/m near 975 nm
Birefringence	2.5×10^{-4}	N/A
Geometrical & Mechanical Specifications		
Cladding Diameter	130.0 ± 1.0 µm	N/A
Cladding Diameter (flat-to-flat)	N/A	130.0 ± 1.5 µm
Core Diameter	5.0 µm	5.0 µm
Coating Diameter	245.0 ± 10.0 µm	245.0 ± 10.0 µm
Coating Concentricity	< 5.0 µm	< 5.0 µm
Core/Clad Offset	≤ 1.00 µm	≤ 1.00 µm
Prooftest Level	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)

The passive version of each fiber is also available - see PM-GDF-5/130 and SM-GDF-5/130

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Nufern products are manufactured under an ISO 9001:2008 certified quality management system.

RoHS

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.