

# 5/130 Passive Double Clad Fibers



Nufer's general purpose passive double-clad fiber is available in two-versions — PANDA-style, polarization-maintaining (PM) and non-PM. Designed specifically to work with 5/130 Yb-doped active fibers for CW applications at lower powers, ensuring low loss and improved splice compatability. These fibers' telecom-type geometrics are compatible with readily available low-cost pump diodes and fiber-based components. They utilize the latest fiber design and NuCOAT™ coating technology to ensure excellent preservation of beam quality and extended operating life demanded by today's industrial fiber laser applications.

## 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 — Compatible with standard telecom 980/1060 nm fiber-based components
- PANDA-style stress structure — Linearly polarized output for frequency conversion"

## Optical Specifications

|                        | PM-GDF-5/130           | SM-GDF-5/130           |
|------------------------|------------------------|------------------------|
| Operating Wavelength   | 1060 – 1600 nm         | 1060 – 1600 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       | ≤ 10.0 dB/km @ 1200 nm | ≤ 10.0 dB/km @ 1200 nm |
| Cladding Attenuation   | ≤ 15.0 dB/km @ 1095 nm | ≤ 15.0 dB/km @ 1095 nm |
| Birefringence          | 2.5 × 10 <sup>-4</sup> | N/A                    |

## Geometrical & Mechanical Specifications

|                       | PM-GDF-5/130                        | SM-GDF-5/130                        |
|-----------------------|-------------------------------------|-------------------------------------|
| Cladding Diameter     | 130.0 ± 1.0 μm                      | 130.0 ± 1.0 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                           |
| Proofstress Level     | ≥ 100 kpsi (0.7 GN/m <sup>2</sup> ) | ≥ 100 kpsi (0.7 GN/m <sup>2</sup> ) |

The active version of each fiber is also available - see PM-YDF-5/130-VIII and SM-YDF-5/130-VIII



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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.