



# 8/130 Precision Matched Passive SM Fibers

Nufern's single mode (SM) passive single and double clad fibers are ideally suited for applications spanning military, industrial and medical including fiber lasers and amplifiers. These fibers feature an 8 micron diameter core and 130 micron diameter clad size with a low NA (0.10) core. They are precision matched to their SM Yb-doped 8/130 matched counterparts to ensure excellent splice compatibility and low loss. These fibers are proof-tested to 100 kpsi, an industry requirement for long term reliability. They utilize the latest fiber design and the double clad fiber features NuCOAT-FA coating technology to ensure excellent preservation of beam quality and extended operating life demanded by today's industrial fiber laser applications.

## Typical Applications

- Pulsed fiber lasers and amplifiers
- Material processing
- LIDAR
- Non-linear optics/frequency doubling

## Features & Benefits

- NuCOAT-FA fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Bend insensitive — Survives application in tight confines
- Precision Matched (M) — Providing low splice loss
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability

## Optical Specifications

Operating Wavelength	1015 – 1115 nm	1015 – 1115 nm
Core NA	0.095	0.095
First Cladding NA (5%)	N/A	≥ 0.46
Mode Field Diameter	8.3 ± 0.5 μm @ 1060 nm	8.3 ± 0.5 μm @ 1060 nm
Cutoff	980 ± 50 nm	980 ± 50 nm
Core Attenuation	≤ 40.0 dB/km @ 1300 nm ≤ 20.0 dB/km @ 1200 nm	≤ 40.0 dB/km @ 1300 nm ≤ 20.0 dB/km @ 1200 nm

## SM-GSF-8/130-M

## SM-GDF-8/130-M

## Geometrical & Mechanical Specifications

Cladding Diameter	130.0 ± 1.0 μm	130.0 ± 1.0 μm
Core Diameter	8.6 μm	8.6 μm
Coating Diameter	245.0 ± 10.0 μm	245.0 ± 10.0 μm
Coating Concentricity	< 5.0 μm	< 5.0 μm
Core/Clad Offset	≤ 0.70 μm	≤ 0.70 μm
Clad Non-Circularity	≤ 0.5 %	≤ 0.5 %
Coating Material	Dual Acrylate Coating	Low Index Polymer NuCOAT-FA
Proof test Level	≥ 100 kpsi (0.7 GN/m <sup>2</sup> )	≥ 100 kpsi (0.7 GN/m <sup>2</sup> )

Designed to work with 8/130 SM Yb-doped active fibers, especially SM-YDF-8/130-9M



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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.

