

8/130 NuGEN9 Precision Matched Active SM Double Clad Fiber



NuGEN9 active fibers offer the most advanced glass composition and fiber design and are all precision matched to their passive counterpart ensuring excellent splice compatibility and low loss. This fiber is a Yb-doped single mode (SM) active double clad fiber featuring an 8 micron diameter core and 130 micron clad diameter with a core NA of 0.095. This fiber is ideally suited for applications spanning military, industrial and medical applications. NuGEN9 fibers feature an optimized glass composition enabling higher absorption with superior photodarkening performance. These fibers are proof-tested to 100 kpsi, an industry requirement for long term reliability. NuGEN9 fibers are exclusively offered with Coherent's proprietary NuCOAT-FA coating technology with the best wet and dry heat performance available, ensuring excellent preservation of beam quality and extended operating life.

Typical Applications

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

Features & Benefits

- NuGEN9 fiber design — Providing higher absorption with superior reliability & photodarkening performance
- NuCOAT-FA fluoroacrylate coating — Excellent wet and dry heat performance for extended life in extreme conditions
- "Few" moded core design — Easy to maintain single mode LP01 beam through fiber & components
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling

Optical Specifications

Operating Wavelength	1015 – 1115 nm
Core NA	0.095
First Cladding NA (5%)	≥ 0.46
Mode Field Diameter	8.3 ± 0.5 μm @ 1060 nm
Cutoff	980.0 ± 50.0 nm
Cladding Attenuation	≤ 15.0 dB/km @ 1095 nm
Cladding Absorption	1.00 ± 0.15 dB/m at 915 nm

SM-YDF-8/130-9M

Geometrical & Mechanical Specifications

Cladding Diameter (flat-to-flat)	130.0 ± 1.5 μm
Core Diameter	8.6 μm
Coating Diameter	245.0 ± 10.0 μm
Coating Concentricity	< 5.0 μm
Core/Clad Offset	≤ 0.70 μm
Coating Material	Low Index Acrylate
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)



Precision matched passive versions of this fiber are also available - see SM-GSF-8/130-M & SM-GDF-8/130-M

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www.coherent.com ; www.shop.coherent.com • Coherent products are manufactured under an ISO 9001:2008 certified quality management system.



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 Coherent can assist with your requirements.

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8/130 Precision Matched Passive SM Fibers



Coherent'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

	SM-GSF-8/130-M	SM-GDF-8/130-M
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

Geometrical & Mechanical Specifications

	SM-GSF-8/130-M	SM-GDF-8/130-M
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	Acrylate	Low Index Acrylate
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)



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

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