

10/130 Precision Matched Passive Double Clad Fibers for 2 Micron



These Coherent precision matched passive double-clad fibers feature a 10 μm core diameter and a 130 μm clad diameter and are optimized to match Coherent's active Tm-doped 10P/130 fibers. This precise matching allows for the lowest splice loss, improving performance for all applications, including low to mid-power CW and pulsed fiber lasers and amplifiers operating in the 2 μm wavelength range. The small core, 0.15 NA fiber facilitates low bend loss and highly efficient single-mode operation while the telecom-like 130 μm cladding diameter makes handling, including cleaving and splicing, as simple as possible.

Typical Applications

- Low to mid power CW and pulsed Eye Safe 2 μm lasers & amplifiers
- Eye Safe industrial & medical lasers
- Military and commercial LIDAR

Features & Benefits

- NuCOATTM fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Robust single-mode core at $\sim 2 \mu\text{m}$ — Easy to maintain single-mode LP01 beam through fiber and components
- PANDA-style stress structure for increased birefringence — Superior optical performance
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling
- Tight geometric tolerances — Excellent lot to lot uniformity

Optical Specifications

Operating Wavelength
Core NA
First Cladding NA (5%)
Cladding Attenuation
Birefringence

SM-GDF-10/130-15M

800 – 2100 nm
0.150 \pm 0.010
 ≥ 0.460
 $\leq 15.0 \text{ dB/km @ } 1095 \text{ nm}$
N/A

PM-GDF-10/130-2000-M

800 – 2100 nm
0.150
 ≥ 0.460
 $\leq 15.0 \text{ dB/km @ } 1095 \text{ nm}$
nominal 1.5×10^{-4}

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Coating Concentricity
Core/Clad Offset
Clad Non-Circularity
Coating Material
Proof test Level

130.0 \pm 1.0 μm
10.0 \pm 1.0 μm
215.0 \pm 10.0 μm
< 5.0 μm
 $\leq 0.70 \mu\text{m}$
 $\leq 0.5 \%$
Low Index Acrylate
 $\geq 100 \text{ kpsi (} 0.7 \text{ GN/m}^2\text{)}$

130.0 \pm 1.0 μm
10.0 \pm 1.0 μm
245.0 \pm 10.0 μm
< 5.0 μm
 $\leq 0.70 \mu\text{m}$
N/A
Low Index Acrylate
 $\geq 100 \text{ kpsi (} 0.7 \text{ GN/m}^2\text{)}$



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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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