CATV Amplifier 6/125
Er:Yb-Doped Double Clad Fibers

Nufern's proprietary rare earth doping technology is used to deliver Er:Yb co-doped fibers with industry leading tolerances on the key parameters important for fiber based amplifiers. This ensures the essential lot-to-lot reproducibility required for volume manufacturing of high power CATV and telecom optical amplifiers at 1550 nm. Nufern's XP version offers an optimized design for higher efficiency and lower parasitic 1 µm ASE delivering superior performance. All these fibers demonstrate high efficiency and high power operation without rollover, enabled by the optimized double clad fiber design.

Typical Applications

- CATV and Telecom amplifiers

Features & Benefits

- Optimized XP version — Higher efficiency and lower 1 µm ASE
- Single-mode core design — Low splice loss to transmission fiber
- Double clad design — High power performance and high power conversion efficiency
- NuCOAT-FA fluoroacrylate coating — Greater fiber durability in extreme operating and storage conditions
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling

Optical Specifications	**SM-EYDF-6/125-XP**	**SM-EYDF-6/125-HE**	**PM-EYDF-6/125-HE**
Operating Wavelength	1530 – 1625 nm	1530 – 1625 nm	1530 – 1625 nm
Core NA	0.210	0.180	0.180
First Cladding NA (5%)	≥ 0.46	≥ 0.46	≥ 0.46
Mode Field Diameter	5.9 ± 0.3 µm @ 1550 nm	6.8 ± 0.8 µm @ 1550 nm	6.8 ± 0.8 µm @ 1550 nm
Cutoff	1470 ± 50 nm	1440 ± 80 nm	1440 ± 80 nm
Cladding Attenuation	≤ 30.0 dB/km @ 1095 nm	N/A	N/A
Normalized Cross Talk	N/A	N/A	≤ - 25.0 dB at 10 m @ 1300 nm
Cladding Absorption	1.00 ± 0.25 dB/m at 915 nm	0.75 ± 0.15 dB/m at 915 nm	0.75 ± 0.15 dB/m at 915 nm
Core Absorption	100.0 ± 20.0 dB/m near 1535 nm	40.0 ± 10.0 dB/m near 1535 nm	40.0 ± 10.0 dB/m near 1535 nm
Geometrical & Mechanical Specifications			
Cladding Diameter	N/A	N/A	125.0 ± 1.0 µm
Cladding Diameter (flat-to-flat)	125.0 ± 2.0 µm	125.0 ± 3.0 µm	N/A
Core Diameter	5.5 µm	6.0 µm	6.0 µm
Coating Diameter	245.0 ± 15.0 µm	245.0 ± 15.0 µm	245.0 ± 15.0 µm
Coating Concentricity	< 5.0 µm	N/A	N/A
Core/Clad Offset	≤ 1.00 µm	≤ 1.00 µm	≤ 1.00 µm
First Cladding Material	N/A	Low Index Polymer	N/A
Coating Material	N/A	N/A	Low Index Polymer
Prooftest Level	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)

Coating Requirements: Low Index Polymer NuCoat-FA.

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