

3 Optical Components

Specialty Fiber Products

L-Band Erbium Doped Single-Mode Optical Fiber

Part Number: **FS-ER-7B28**

Stock Number: 98-0400-4474-9

February 2002

Supersedes May 2001

Product Applications

- Optical amplifiers for CATV and WDM applications
- In-line amplifiers
- ASE Sources
- Booster amplifiers
- Laser delivery systems

Features and Benefits

- 3M Erbium-Doped fiber has a Lanthanum-Aluminosilica core which is doped with Erbium (Er^{3+} - La_2O_3 - Al_2O_3 - SiO_2). This fiber is optimized for applications where it is necessary to restore power to a depleted signal in the L-Band wavelength region with minimum added noise.

Typical Fiber Characteristics

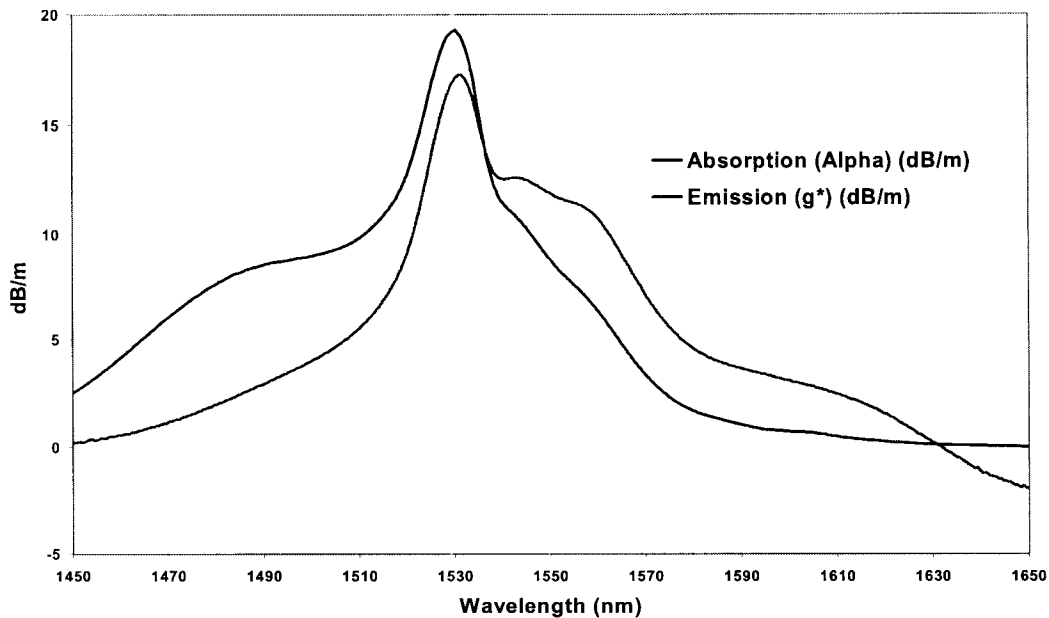
	Value	Units
Operating Band:	L-Band	
Second Mode Cutoff Wavelength:	< 950	nm
Mode Field Diameter at 1550 nm ^a :	5.0 +/- 0.5	um
Maximum Attenuation at 1200 nm:	< 11.0	dB/km
Nominal Numerical Aperture:	0.26	
Peak Absorption at 1530 nm:	18	dB/m
Absorption Variability @ 1530 nm:	4	% of peak/km
Peak Absorption @ 980 nm:	< 11	dB
Polarization Mode Dispersion ^c :	< 4	fs/m
Cladding Diameter:	125 +/- 2.0	um
Maximum Clad Non-Circularity:	< 1	%
Maximum Core-to-Clad Offset:	0.75	um
Coating Style:	Dual Coat (acrylate/acrylate)	
Outer Primary Buffer Coating Diameter:	250 +/- 15	um
Maximum Outer Primary Buffer Coating Non-Circularity:	< 2.5	%
Proof Test Level ^d :	150	kpsi
Operating Temperature Range:	-20 to 85	C

^a The Mode Field Diameter is measured at the operating wavelength per EIA/TIA-455-167A and reported as the Petermann II result.

^c PMD is measured on a 6" shipping spool and is expressed linear with length rather than root length as the typical device lengths are shorter than the coupling length, thus have a linear dependence

^d Fiber at higher proof levels can be provided

Alpha and g* for FS-ER-7B28 Erbium-Doped Fiber



Contact Information

For information regarding fiber and fiber grating products from 3M Optical Components please contact 3M Optical Components Customer Service Representative at the number below:

1-866-474-9029

OR, view our web site at:

www.3m.com/fibers

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