



Doped Fiber

VERSION: MD20/1
RELEASE DATE: 8 NOVEMBER 2013

Datasheet

Erbium Doped Fiber MetroGain™

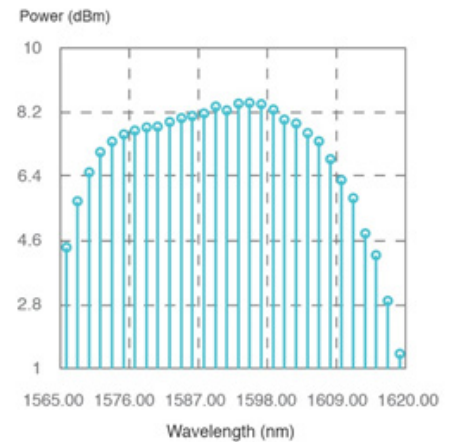
Fibercore's MetroGain™ range is designed for high efficiency 'Metro-style' Erbium Doped Fiber Amplifier (EDFA) configurations, single stage amplifiers, Amplified Spontaneous Emission (ASE) light sources and single channel or few channel EDFAs.

M-5(980/125) offers a relatively low level of doping to simplify EDFA manufacturing processes by reducing the sensitivity of the amplifier output to the precise gain length.

M-12(980/125) gives high absorption levels to allow short gain lengths and reduced material costs.

M-12(980/80) is an 80µm variant, benefitting from the higher absorption of the standard M-12(980/125) but allowing significantly longer mechanical lifetimes when used in small coil diameters, particularly important for small form factor EDFA designs such as mini EDFAs and micro EDFAs.

M-3(1480/125) is designed for pumping at 1480nm, accessing higher pump conversion efficiencies than pumping at 980nm.



Supported by Fibercore's **GainMaster™** simulation software

Advantages:

- High conversion efficiency
- High absorption variants available for short amplifiers and EDFAs
- 80µm variant for small coil diameter applications

Typical applications:

- Erbium Doped Fiber Amplifiers (EDFAs)
- Amplified Spontaneous Emission (ASE) light sources
- Single channel amplifiers
- Mini and micro EDFAs

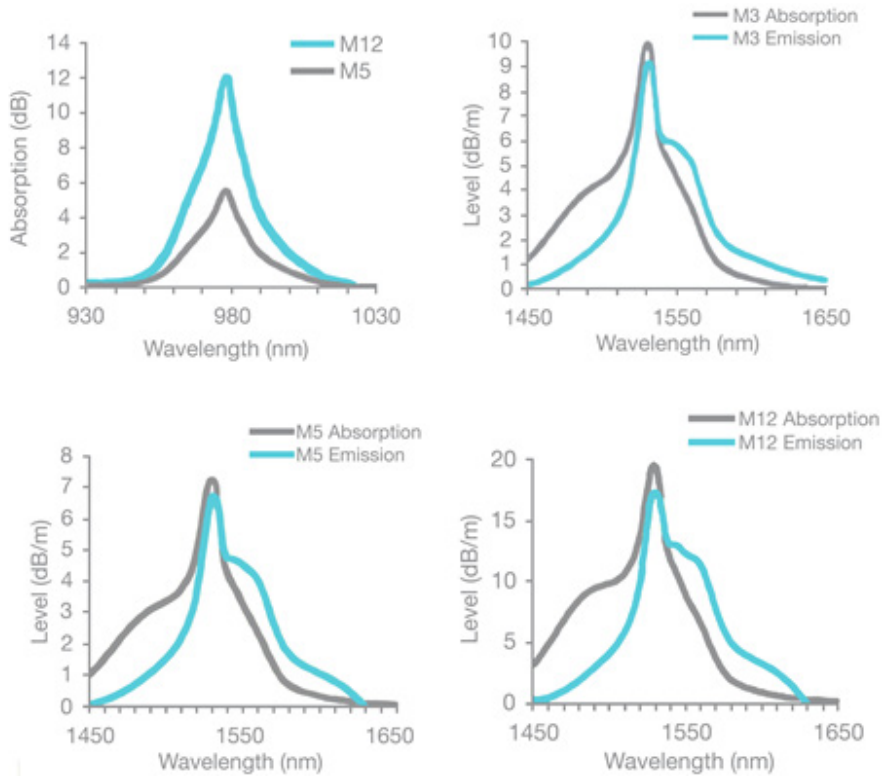
Related Products:

- Erbium Doped Fiber IsoGain™
- Dual-Clad Erbium/Ytterbium Doped Fiber (CP1500Y)
- GainMaster™ Simulation Tool

Product Variants:

- **M-3(1480/125)** Designed for single channel C-band amplifiers
- **M-5(980/125)** Designed for single channel C-band amplifiers
- **M-12(980/125)** Designed for short length single channel C-band amplifiers and L-band amplifiers
- **M-12(980/80)** Designed for small package size C-band and L-band amplifiers

Typical Absorption and Emission Spectra



Specifications

	M-3(1480/125)	M-5(980/125)	M-12	
			(980/125)	(980/80)
Cut-Off Wavelength (nm)	1300 – 1450	900 - 970		
Numerical Aperture	0.21 - 0.24			
Mode Field Diameter (µm)	5.1 – 5.9 @1550nm	5.5 – 6.3 @1550nm	5.7 – 6.6 @1550nm	
Absorption (dB/m)	2.8 – 3.8 @1480nm 6.5 – 10.1 @1531nm	4.5 – 5.5 @980nm 5.4 – 7.1 @1531nm	11.0 – 13.0 @980nm 16.0 – 20.0 @1531nm	
Proof Test (%)	1 (100kpsi)			
Attenuation (dB/km)	≤10 @1200nm			
Polarization Mode Dispersion (ps/m)	≤0.005			
Cladding Diameter (µm)	125 ± 1		80 ± 1	
Core Concentricity (µm)	≤0.3			
Coating Diameter (µm)	245 ± 15		170 ± 10	
Coating Type	Dual Acrylate			

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