mEDFA | Erbium Doped Fiber Amplifier

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The QAMnet mEDFA series of Erbium Doped Fiber Amplifiers (EDFA) are modular optical amplifiers designed for system integrators in HFC, FTTH, PON and deep-fiber systems. By combining 980 nm/1480 nm pump laser modules and high efficiency erbium doped fiber, mEDFA amplifiers deliver optical output levels up to +24 dBm while maintaining low noise figure (NF). Designed to operate over a wide temperature range, mEDFA are easy-to-use, reliable, and cost-effective solutions.

Depending on the pump lasers configuration, mEDFA amplifiers produce optical output levels from +17 dBm up to +24 dBm.

Features

- Module design for simple system integration
- High reliability 980 nm and 1480 nm pump lasers
- Designed to operate over a wide temperature range: -40°C to +55°C
- Forward and backward pumping to minimize noise figure (NF)
- Single +5 VDC power supply
- Input power level range: -10 dBm to +8 dBm
- Standard Automatic Current Control (ACC) or optional Automatic Power Control (APC)

Ordering Information

- mEDFA-xx
- xx: 17, 20, 23, 24 (Output Power in dBm)

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Technical Specifications

Operating Wavelength Range	1528 nm to 1563 nm
Output Power Level (1550nm and +3dBm Input)	
mEDFA-17	16.7 dBm Minimum, 17.0 dBm Typical
mEDFA-20	19.7 dBm Minimum, 20.0 dBm Typical
mEDFA-23	22.7 dBm Minimum, 23.0 dBm Typical
mEDFA-24	23.7 dBm Minimum, 24.0 dBm Typical
Number of Outputs	1 output standard, multiple output ports can be customized
Optical Return Loss	50 dB Minimum
Input/Output optical Isolation	30 dB Minimum
Polarization Mode Dispersion	1.0 ps Maximum
Polarization Dependent Gain	0.15 dB Maximum
Noise Figure (NF)	5.0 dB Maximum @ +3 dBm Input
Input Power Range	-10 dBm to +8 dBm
Output Power Stability	0.25 dB over 8 hours
Input Output Fiber Type	Corning SMF-28

Environment / Mechanical Specifications

Temperature Range	-40°C to +55°C (operation) -50°C to +70°C (storage)
Power Supply	+5 VDC
Power Consumption	35 W Maximum
Housing Dimensions	+23 to +24 dBm: 10”(L) x 6”(W) x1.3”(H) +17 to +20 dBm: 8”(L) x 6”(W) x 1”(H)
Control / Monitoring	Pump Laser Temperature and Current
Optical Connectors	SC/APC or Customer Specified

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