gEDFA | Erbium Doped Fiber Amplifier

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The QAMnet gEDFA series Erbium Doped Fiber Amplifiers (EDFA) are high gain, in-line amplifiers for use in HFC, FTTH and DWDM applications. By using a dual amplifier design, gEDFAs can provide optical gains of up to 45 dB while maintaining low noise figures (NF). gEDFAs are versatile amplifiers that can be used for very wide range of input levels.

Depending on the pump laser configuration, gEDFA amplifiers produce optical output levels from +17 dBm up to +24 dBm. The in-line gEDFA is designed with dual amplifier – pre-amp and power amplifier with housing of a standard 19" 1RU rack-mount unit.

Features

- Highly reliable 980 nm and 1480 nm pump lasers
- Dual amplifier design: pre-amp and power amplifier
- Pump laser operating temperature and bias current continuously regulated by microcontroller
- Forward and backward pumping to minimize noise figure (NF)
- Wide input power level range: -15 dBm to +5 dBm
- Optical gain up to 45 dB
- Standard Automatic Current Control (ACC) or optional Automatic Power Control (APC)
- LCD front panel digital display and LED status indicators
- Software Control through RS-232, RS485 available as option

Ordering Information

- gEDFA-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 (1550 nm and -10 dBm Input)	
gEDFA-17	16.7 dBm Minimum, 17.0 dBm Typical
gEDFA-20	19.7 dBm Minimum, 20.0 dBm Typical
gEDFA-23	22.7 dBm Minimum, 23.0 dBm Typical
gEDFA-24	23.7 dBm Minimum, 24.0 dBm Typical
Number of Outputs	1 output standard
Optical Gain	Up to 50 dB, depending on the model
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)	5.2 dB Maximum @ -10 dBm Input
Input Power Range	-15 dBm to +5 dBm
Output Power Stability	0.15 dB over 8 hours
Input / Output Fiber Type	Corning SMF-28

Environment / Mechanical Specifications

Temperature Range	0ºC to +50ºC (operation) -40ºC to +70ºC (storage)
Power Supply	80 – 240 V, 43 – 63 Hz AC 40 - 58V DC (Optional)
Power Consumption	60 W Maximum
Housing Dimensions	1RU: 19”(W) x 14”(D) x 1.75”(H)
Control / Monitoring	Pump Laser Temperature and Current
Display	Output Power Level, TEC Temperature
Alarms	Over Temperature , Over Current
Optical Connectors	SC/APC or Customer Specified

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