

Gain Flattened Inline EDFA for DWDM Networks

The Optilab EDFA-GI series is a Gain-Flattened Erbium Doped Fiber Amplifier designed for in-line amplification of DWDM networks.

EDFA-GI Gain Flattened Inline EDFA for DWDM Networks



Product Description

The Optilab EDFA-GI series is a line of Gain-Flattening Erbium Doped Fiber Amplifiers designed for in-line amplification of DWDM networks. When a standard EDFA is used to amplify multi-channel DWDM signals, the output power level of various channels will vary according to the gain profile of the erbium fiber. The gain variation can be as great as 6dB in magnitude. The EDFA-GI has unique features of a dual-stage amplification and an internal Gain Flattening Filter (GFF) to compensate for the erbium fiber gain variation. This design enables EDFA-GI to reduce the gain variation to ± 0.5 dB over its full operating wavelength range from 1529nm to 1561nm. Depending on the input power level of each channel, EDFA-GI is able to amplify up to 64 DWDM channels.

Features

- Compatible with 10 Gb/s and 40 Gb/s
- Channel spacing of 100 GHz or 50 GHz
- Flatten gain amplification from 1529 nm to 1561 nm
- Amplify 8 to 64 DWDM channels
- High output power up to +24 dBm
- Four pump sources for exceptional reliability
- Optional SNMP/RS-232 interface

PRODUCT SPECIFICATIONS

Optical Specifications

Operating Range	1529 nm to 1561 nm
Amplifier Design	Dual-stage with Internal Gain Flattening Filter
Output Power Levels	+18 dBm to +24 dBm
Number of Pump Laser	4 total, 980 nm (2) and 1480 nm (2)
Input Signal Level per Channel	-7 to -15 dBm, for gain flatness to ± 0.5 dB *
Number of Channels	Can accommodate 8 - 64
Optical Gain per Channel	13 to 21 dB, depending on input level
Gain Flatness	± 0.5 dB
Noise Figure	5.0 dB typ.
Polarization Dependent Gain (PDG)	0.2 dB max.
Polarization Mode Dispersion (PMD)	0.5 ps max.
Output Power Stability	± 0.05 dB over 8 hours
Input/Output Isolation	30 dB min.
Optical Fiber	Single Mode, SMF-28

Ordering Information

EDFA-GI-xx-B

xx: Output power level 18 – 24 dBm



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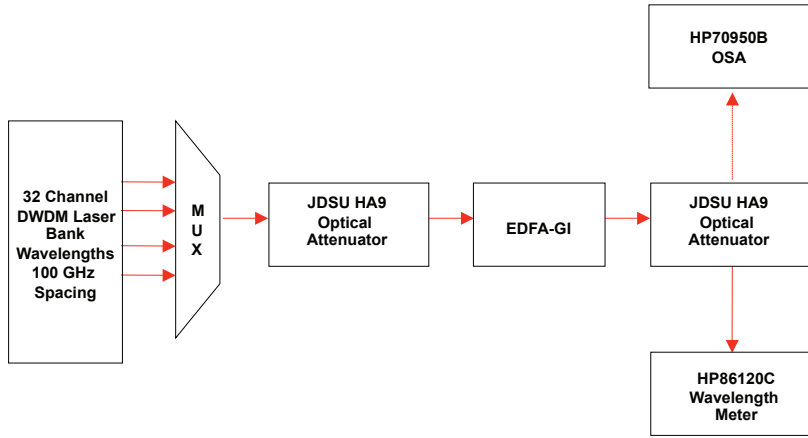


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Product specifications and description are subject to change without notice.
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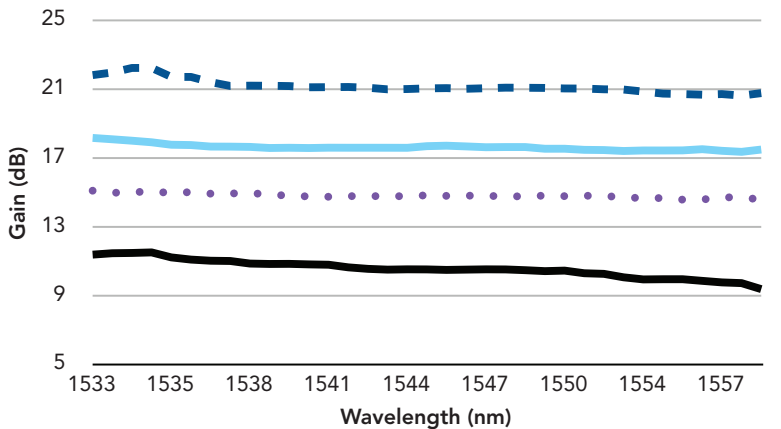
Block Diagram



Additional Information

The EDFA-GI is a versatile and powerful line of fiber amplifiers. The EDFA-GI series incorporates four pump sources, two 980nm lasers and two 1480nm lasers. With all four pump lasers set to maximum operating current, the total output power level of EDFA-GI can reach +24dBm (250mW).

Housed inside a standard 1U rack mount case, the EDFA-GI has an easy to use control interface and clear LCD display. This product is constructed with 100% Telcordia qualified components to ensure 15 years of continuous operating life and is covered under Optilab’s three-year standard warranty. Optilab’s technical team provides full product support and application development consultation.



— Input -5 dBm ··· Input -9 dBm — Input -12 dBm - - - Input -15 dBm
EDFA-GI Gain Flatness¹

¹ (Measured by Agilent 8703A Lightwave Component Analyzer)

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Mechanical Specifications

Operating Temperature	0° C to +50° C
Storage Temperature	-40° C to +70° C
Power Supply Requirements	80 - 240 V, 43 - 63 Hz AC
Power Consumption	80 W max.
Control	Pump Laser Current Adjustment
Monitoring	Pump Laser Temperature
Computer Interface	RS-232 (Optional), SNMP (Optional)
Display	Output Power Level, TEC Temperature
Alarms	Temperature and Current Threshold
Optical Connectors	FC/APC, SC/APC
Housing Dimensions	1U Rack: 19" x 14" x 1.5"
Housing	Precision Machined Aluminum, Anodized

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