Multiple Wavelength Erbium Doped Fiber Amplifier

QAMnet wEDFA series are Gain-Flattened Erbium Doped Fiber Amplifiers designed for amplifying HFC, RFOG and FTTH applications that incorporates multiple lasers with different wavelength.

wEDFA Multiple Wavelength Erbium Doped Fiber

Product Description

QAMnet wEDFA series are Gain-Flattened Erbium Doped Fiber Amplifiers designed for amplifying HFC, RFoG and FTTH applications that incorporates multiple lasers with different wavelength. These lasers are typically defined as Dense Wavelength Division Multiplexing (DWDM) lasers. When a standard EDFA is used to amplify multiple DWDM lasers, the output power level of various lasers will vary according to the gain profile of erbium fiber. This gain variation can be as much as 6 dB in magnitude. The wEDFA series has unique features of dual-stage amplification and internal Gain Flattening Filter (GFF) to compensate this gain variation. This design enables the wEDFA to reduce the gain variation down to ± 0.5dB over and making all the DWDM lasers have a nearly equal level of power.

Features

- High power pump lasers from qualified suppliers
- Laser operating temperature and current regulated by microcontroller
- Forward and backward pumping to minimize noise figure (NF)
- Input power level range: -8 dBm to +12 dBm
- Standard Automatic Current Control (ACC)
- LCD front panel digital display and LED status indicators
- Remote Control through RS-232, or SNMP available as an option

Applications

✓ HFC ✓ FTTH ✓ RFoG ✓ DWDM ✓ PON ✓ Narrowcasting

PRODUCT SPECIFICATIONS

Optical Specifications

Operating Wavelength Range	1530 to 1560 nm
Amplifier Design	Dual-stage with internal Gain Flattening Filter
Output Power Level	+22dBm, +23 dBm
Number of Pump Laser	4 total, 980 nm (2) and 1480 nm (2)
Input Signal Level per Channel	-3 to -15 dBm
Number of Wavelength Channel	1-32
Optical Gain per Channel	13 - 21 dB, depending on input level *
Gain Flatness	±0.5 dB over full wavelength range of 32 channels
Noise Figure (NF)	5.0 dB typ.
Output Power Stability	±0.1 dB over 8 hours
Input/Output Isolation	30 dB min.
Optical Fiber	Single Mode, SMF-28

Mechanical Specifications

Operating Temperature Range	0°C to +50°C
Storage Temperature Range	-40°C to +70° C
Power Supply	80 – 240 V, 43 – 63 Hz AC 40 - 58 VDC (Optional)
Power Consumption	60 W max.
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
Alarm	Over Temperature , Over Current
Optical Connectors	SC/APC or Customer Specified

Ordering Information

	wEDFA-xx
xx	Output power level +22, +23 dBm

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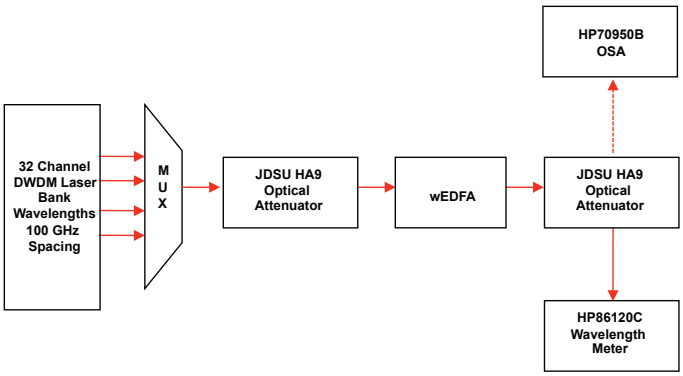
1550nm Swept Laser OEM

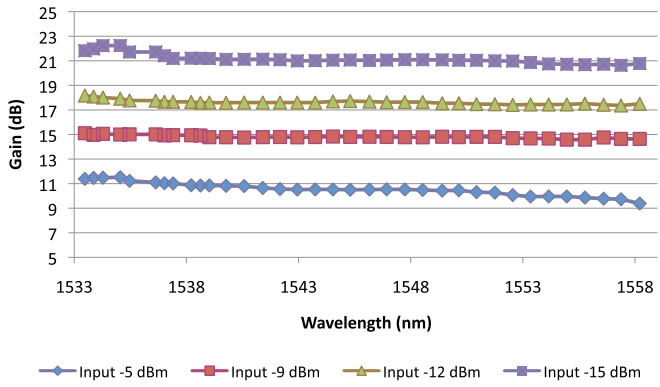
Product Description

Depending on the input power level of each channel, the wEDFA can amplify from single laser to 32 DWDM lasers. The wEDFA series are powerful amplifiers incorporating four pump sources, two 980 nm lasers and two 1480 nm lasers. With all four pump lasers set to maximum operating current, the total output power level of the wEDFA can reach +23 dBm (200 mW).

Housed inside standard 1RU height rack mount case, the wEDFA has a simple control interface and clear LCD display. The wEDFA series are constructed with 100% qualified components to ensure 15+ years of continuous operating life. The wEDFA series is covered under three year standard warranty. QAMnet's technical team provides full products support and applications development consultation.



Block Diagram for wEDFA



wEDFA Gain Flatness

Electrical Specifications

Sweep Voltage Input	12 Volt p-p typical, 15 Volt p-p max.
Sweep Frequency Bandwidth	Up to 2 KHz with proper driver electronics
Voltage Input Connector	SMA Female
Control Board Supply Voltage	+5V DC
Supply Current	2A maximum

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