wEDFA | Multiple Wavelength EDFA

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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 laser are typically defined as Dense Wavelength Division Multiplexing (DWDM) lasers. When 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 6dB in magnitude. wEDFA series has unique features of dual-stage amplification and internal Gain Flattening Filter (GFF) to compensate this gain variation. These designs enable wEDFA to reduce the gain variation down to +/- 0.5dB over and making all DWDM lasers has nearly equal level of power.

wEDFA are very versatile EDFA. Depending on the input power level of each channel, wEDFA can amplify from single laser to 32 DWDM lasers. wEDFA series are powerful amplifier. Each wEDFA 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 wEDFA can reach +23 dBm (200mW).

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

Features:

- Compatible with WDM PON, NarrowCasting, DWDM
- Flatten gain amplification from 1530nm to 1560nm
- Amplify 4 to 32 DWDM channels
- High output power up to +23dBm
- Four pump sources can be adjusted individually
  - Two 980nm pump lasers
  - Two 1480nm pump lasers

Ordering Information

- wEDFA-xx

xx: Output power level, 22, 23 dBm

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Technical Specifications

Operating Wavelength Range	1530 to 1560 nm
Amplifier Design	Dual-stage with internal Gain Flattening Filter
Available Output Power Levels	+22dBm, +23 dBm
Number of Pump Laser	4 total, 980nm (2) and 1480nm (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	+/- 0.5dB over full wavelength range of 32 channels
Noise Figure	5.0 dB typical
Output Power Stability	+/- 0.1dB over 24 hours
Input / Output Isolation	30 dB minimum
Optical Fiber	Single Mode, SMF-28

** Based on 32 channel of DWDM input signals with 100GHz channel spacing. See test data in the next page*

Environment / Mechanical Specifications

Temperature Range	0ºC to +50ºC (operation), -40ºC to +70ºC (storage)
Power Supply	80 - 240 V, 43 - 63 Hz AC
Power Consumption	80 W Maximum
Housing Dimensions	1U Rack: 19”(W) x 14”(D) x 1.75”(H)
Control	Pump Laser Enable
Monitoring	Pump Laser temperature, Output power
Computer Interface	RS-232
Display	Output Power Level, TEC Temperature
Alarms	Over Temperature , Over Current
Optical Connectors	SC/APC

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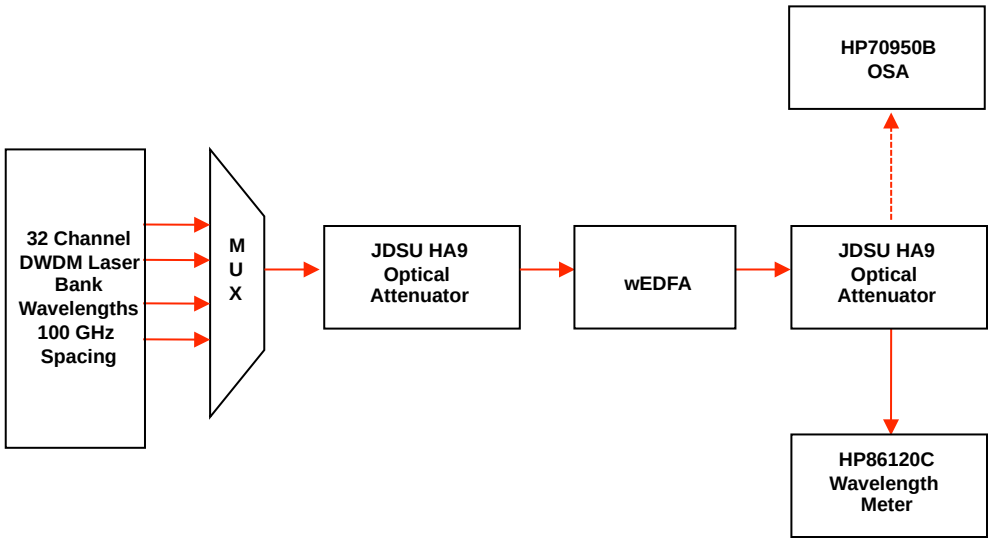
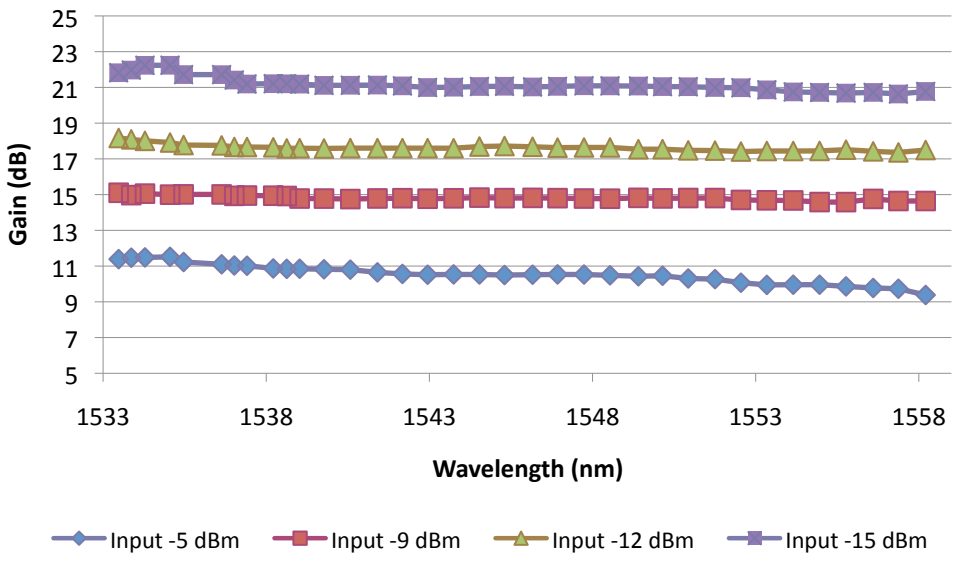
wEDFA Test Configuration



wEDFA Gain Flatness



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