



DEVICE MSA Pre-Amp EDFA Module, C-band

OVERVIEW The Optilab EDFA-PA-MSA is a high-gain pre-amplifier module in a multiple source agreement footprint housing. It is an easy-to-use and cost-efficient solution for photonic subsystems, OEM integration, and fiber optic system integration. Using a high gain design, this pre-amp module provides over 30 dB gain with a 4.5 dB noise figure, good for input power level as low as -40 dBm. Software control via an a standard TTL RS-232 interface is available for status monitoring and pump current adjustments. It also features pump laser protection and alarms to ensure the reliability and safety of the device. The EDFA-PA-MSA only requires a single +5 Volt DC power supply for operation. Contact Optilab for more information.

FEATURES

- MSA footprint
- RS-232 standard for remote control
- Wide wavelength operation range
- 30 dB gain
- Internal Isolators

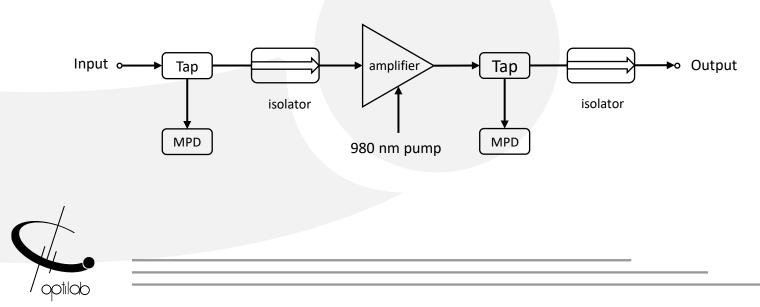
- Low noise figure
- Designed for low input level
- Single +5V power supply
- 10+ years of operation life

USE IN

- Photonic subsystems
- Fiber optic link amplification

- OEM integration for
 - DWDM networks
 - DFC/CATV
 - RFoG/PON

FUNCTIONAL DIAGRAM





SPECIFICATIONS

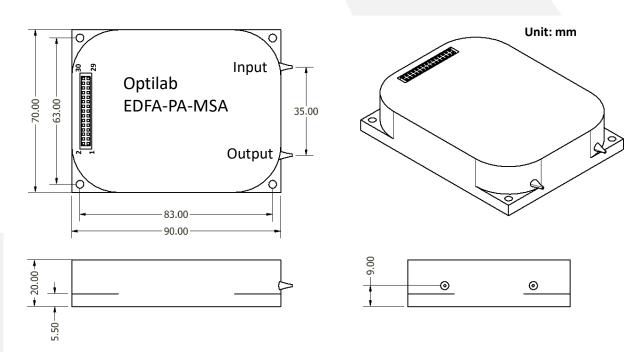
Saturation Output Power +I5 dBm min. +I6 dBm typical Optical Gain 28 dB min. III - 30 dBm input Noise Figure 4.5 dB typ 5.0 dB max. Optical Return Loss 50 dB min. Input Optical Isolation 30 dB min. Output Optical Isolation 30 dB min. Output Optical Isolation 30 dB min. Polarization Mode Dispersion 0.1 ps max. Polarization Dependent Gain 0.1 dB max. Input Power Range -40 dBm to +5 dBm Output Power Stability 0.15 dB over 8 hours Operation Mode AEC Input/Output Fiber Type Cornning SMF-28 Power Supply +5 VDC, 4.0 A max. Power Consumption 20 W max. Fiber Type SMF-28 Fiber Type SMF-28 Fiber Type SMF-28 Fiber Type SMF-28 Fiber Jacket 900 um losse tube Connector (Power and Control) 2 x IS pin header, 2.0 mm pitch Remote Control RS-232 for laser cantrol, status monitaring Dimensions 90 pm x 20 mm Power Adapters 30 Pin to Molex and US8 Adapter, included	GENERAL	Operating Range	1528 nm – 1563 nm
Noise Figure 4.5 dB typ. 5.0 dB max. Optical Return Loss 50 dB min. Input Optical Isolation 30 dB min. Output Optical Isolation 30 dB min. Polarization Mode Dispersion 0.1 ps max. Polarization Dependent Gain 0.1 dB max. Input Power Range -40 dBm to +5 dBm Output Power Stability 0.15 dB over 8 hours Operation Mode ACC Input/Output Fiber Type Corning SMF-28 MECHANICAL Operating Temperature -10°C to +50°C Power Supply +5 V DC. 4.0 A max. Power Consumption 20 W max. Fiber Type SMF-28 Fiber Jacket 900 um losse tube Connector Type FC/APC Connector (Power and Control) 2 x 15 m header. 2.0 mm pitch Remote Control RS-232 for laser control, status monitoring Dimensions 90 mm x 70 mm x 20 mm Power Adapters 30 Pin to Molex and USB Adapter, included		Saturation Output Power	+15 dBm min. +16 dBm typical
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		Power Adapters	30 Pin to Molex and USB Adapter, included



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MECHANICAL DRAWING



ELECTRICAL PINOUT

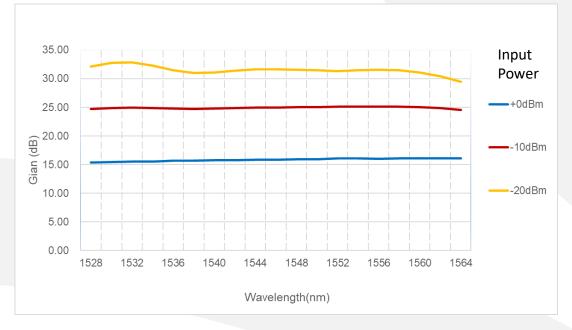
PIN #	DESCRIPTION		DESCRIPTION
1	+5V		+5V
3	NC		NC
5	GND		GND
7	RS232 RX, TTL		RS-232 TX, TTL
9	GND	10	GND
11	NC	12	NC
13	Amplifier Enable, active low, 3.3V LVCMOS	14	NC
15	Case Temp Alarm*, active high, 3.3V LVCOMS	16	NC
17	NC	18	NC
19	Loss of Input Alarm*, active high, 3.3V LVCMOS	20	Loss of Output Alarm*, active high, 3.3V LVCOMS
21	GND	22	GND
23	NC	24	NC
25	GND	26	GND
27	NC	28	NC
29	+5V	30	+5V



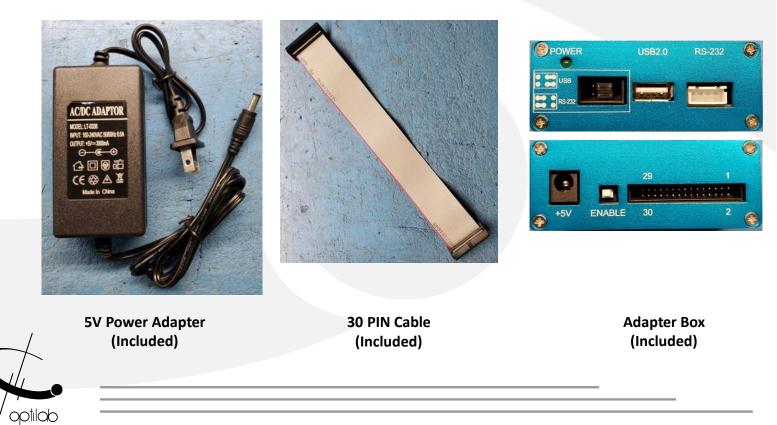
* Alarm function is disabled in the firmware.



GAIN SPECTRUM



ACCESSORIES



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