

Benchtop Erbium-Doped Fiber Amplifier

EDFA Series



Key Features

- Choice of wavelengths C- or L- bands
- High output power and gain
- Mid-span access
- Compact benchtop design with rackmount kit
- Single channel and multichannel dense wavelength division multiplexing (DWDM) capabilities
- RS-232 remote control

Applications

- Pre-amp booster, in-line amplifier emulation
- Dense wavelength division multiplexing (DWDM) transmission, for multichannel applications
- SONET/SDH systems, for single channel applications

Safety Information

Complies to CE requirements plus UL3101-1 and CAN/CSA-C22.2 No. 1010.1 Meets the requirements of Class 3B in standard IEC 60825-1(2002) and complies with 21CFR1040.10 except deviations per Laser Notice No. 50, July 2001.

The Benchtop Erbium-Doped Fiber Amplifier (EDFA) amplifies optical signals across the EDFA window (1528 to 1610 nm). Through optimization of amplifier gain, noise figure, and saturated output power, the EDFA will expand your test capabilities in systems, components or sub-assembly manufacturing as well as research and development (R&D) environments.

The amplifier incorporates a unique design to produce maximum signal gain and saturated output power in the 1550 and 1590 nm test bands while minimizing noise figure. It features a user-friendly front panel housing an LCD displaying input/output power, current control and an optical interface.

The amplifier is offered in C-band, L-band and C+L-band versions and pre-amplifier, booster, or in-line amplifier configurations.

The Benchtop models provide specialized variants and optical performance not available in the Multiple Application Platform (MAP) line. Additional EDFA models are available in the MAP EDFA product line.

INVISIBLE LASER RADIATION
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
(IEC 60825-1, 2002)
MAX. 500 mw, 700-1680 nm

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Specifications

MODEL	OAB1552	OAB1592	OAB1596	OAB1598	OAB1562	OAB1564
Test band	C-band	L-band	L-band	L-band	C+L-band	C+L-band
Amplifier type	Booster high power	Booster high power	Mid-span access DWDM	Booster DWDM	Booster	In-line
Operating wavelength range	1528 to 1563 nm	1565 to 1610 nm	1570 to 1603 nm	1570 to 1603 nm	1530 to 1560 nm 1570 to 1600 nm	
Input signal	Single channel		Multichannel DWDM		Single Channel	
Saturated output power ¹	≥24 dBm	≥22 dBm	≥20 dBm	≥20 dBm	≥19 dBm	≥14 dBm
Noise figure ²	≤5.0 dB	≤5.5 dB	≤5.8 dB	≤5.5 dB	≤6.5 dB	≤6.5 dB
Small signal gain ³	≥36 dB	≥29 dB	≥22 dB	≥20 dB	≥22 dB	≥20 dB
	(MS loss ≤ 7 dB)					
Spectral gain flatness ⁴	N/A	N/A	1.7 dB	1.7 dB	N/A	N/A
Polarization dependent loss (PDL)	≤0.2 dB	≤0.3 dB	≤0.3 dB	≤0.9 dB	≤0.4 dB	≤0.4 dB
Polarization mode dispersion (PMD)	≤0.45 ps	≤0.8 ps	≤0.9 ps	≤0.9 ps	≤0.7 ps	≤0.7 ps
Input/output isolation	45/32 dB	40/40 dB	40/40 dB	40/40 dB	40/40 dB	40/40 dB
Input/output monitors	Yes					
Input voltage	100 to 240 V AC, 50 to 60 Hz					
Power consumption	90 V A Maximum					
Packaging	Half-rack benchtop and 19-inch rackmount kit					
Operating temperature	0 to 50 °C					
Storage temperature	- 40 to 70 °C					
Humidity	Maximum 95 % RH non-condensing from 0 to 45 °C					
Dimensions (W x H x D)	21.2 x 8.9 x 35.5 cm					
Weight	> 4 kg					

1. Saturated Output Power measured:

- At 1550 nm at Pin = - 4 dBm for model 1552
- At 1590 nm at Pin = 0 dBm for model 1592 and 1598
- At 1590 nm at Pin = - 2 dBm for model 1596
- At 1550 nm at Pin = - 4 dBm and at 1590 nm and Pin - 0 dBm for model 1562 and 1564

2. Noise figure measured:

- At Pin = - 4 dBm for model 1552 and 1592
- At Pin = - 4 dBm for model 1596
- At Pin = 0 dBm for model 1598
- At Pin = - 20 dBm for model 1562 and 1564

3. Small signal gain measured:

- At Pin = -20 dBm for model 1552, 1562, 1564, and 1592
- At Pin = -2 dBm for model 1596
- At Pin = 0 dBm for model 1598

4. Flatness optimized for:

- At Pin = -2 dBm (1570-1603 nm)
- At Pin = 0 dBm (1570-1603 nm)

