

IPG Photonics

EAD Series

40 to 500mW Universal Single-Channel C- and L-band

Erbium Fiber Amplifiers

Bench-Top and 19" Rack-Mount Packages

EAD Series versatile single-channel C-band (1533 to 1570nm) and L band (1560 to 1610nm) Erbium Doped Fiber Amplifiers are conveniently packaged for use in a laboratory environment. Amplification occurs via multimode diode pumping coupled into a multi-clad Yb-Er fiber. Everything is contained in one bench-top instrument including the EDFA with your choice of 40mW to 500mW saturated power output. The user-friendly front panel includes a monitor display, a keyed on/off switch, power control and fiber input/outputs. RS232 control is also provided on the rear panel. These universal devices operate in the temperature range of 0-50°C and require 100/110/220V AC (50/60Hz). They can be employed for research and development in the fields of telecommunications, wireless communications, photonic switching, sensors, etc.

Main Features:

- The choice of 40mW to 500mW output power
- 1533 to 1570nm or 1560 to 1610nm operational bandwidth
- Optional band extension down to 1528nm
- Low noise figure
- Extremely low PMD
- Super stable power option
- Dispersion compensation option
- Excellent performance to cost ratio
- Two year warranty

Applications:

- Fiber Optic Communications
- Wireless Communications
- Photonics Switching
- Sensorics



Common Parameters

Standard moderate power EAD-C Erbium Amplifiers provide an amplification of the randomly polarized single wavelength signal in the 1533-1567nm region and the EAD-L Series Erbium Amplifiers in the 1565-1603nm region. Typical bandwidth of the amplifier is 35nm (FWHM). Typical amplifier input and output are provided by a 1.5 meter, standard SMF-28 optical fiber cable with FC/PC, FC/SPC or FC/APC connectors at the input and output. Typically an amplifier has 50dB input and 30dB output optical isolation. As an option, the EAD Series includes the linear polarization option with the extinction ratio of >17dB.

The front panel provides user control of the amplifier output power and readout of the pump diodes current and pump diodes temperature. The RS-232 or GPIB port on the rear panel allows computer control of the amplifier.

All EAD Series Amplifier Modules utilize broad stripe (1x100µm) pump diodes operating at a 970nm nominal wavelength. Minimum pump diode reliability is 500,000 hrs MTBF at 20°C. All pump diodes are subjected to intensive stress testing at IPG facility prior to installation.

Specifications

	Unit	EAD-C	EAD-L
Saturated output power	dBm	16-27	18-27
Optical bandwidth	nm	1530-1570	1555-1605
Saturation gain equalization	dB	±0.3 (at 1533-1567nm, P _{in} =3dBm)	±0.7 (at 1565-1603nm, P _{in} =3dBm)
Polarization sensitivity of saturated output power	dB	0.2	0.2
Typical noise figure	dB	5.0 (at 1533-1567nm, P _{in} =3dBm)	6 (at 1565-1603nm, P _{in} =3dBm)
Polarization mode dispersion	ps	0.2	0.5
Maximum power consumption	W	20	20

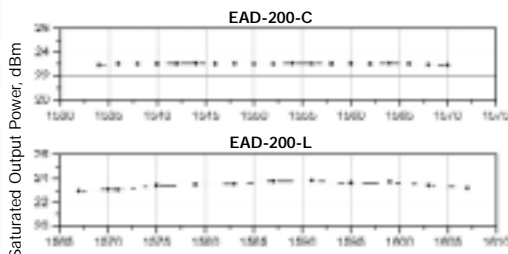
Options:

- Polarization Maintaining
- Input Power Control
- Super Stable Operation
- Dispersion Compensation
- ASE Operation Mode
- Choice of Beam Delivery Cable Length
- Benchtop or 19" Rackmount

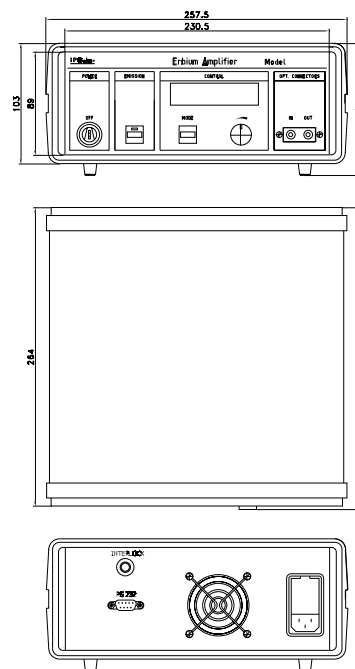
General Environmental Parameters

	Unit	Min.	Max.
Operating temperature	°C	0	+50
Storage temperature	°C	-10	+60
Humidity	%	0	95
Warm up time	min		1
Cooling		Forced air/heat sink	

Output Spectra



Outline Drawings



NOTE: Performance & size can be matched to the customers requirements. Contact IPG with your requirements.

IPG Photonics Corporation
P.O. Box 519
Sturbridge, MA 01566, USA
Tel: +1 508 347 6800
Fax: +1 508 347 6838
E-mail: sales@ipgphotonics.com

IPG Laser GmbH
Siemensstrasse 7
D-57299, Burbach, Germany
Tel: +49 2736 4420 0
Fax: +49 2736 4420 25
E-mail: ipglaser@t-online.de

IPG Fibertech S.r.l.
Via Pisacane, 46
20025 Legnano (MI), Italy
Tel: +39 0331 4874 00
Fax: +39 0331 4874 11
E-mail: ipgfibertech@cfc.it

<http://www.ipgphotonics.com>

IP Fiber Devices
22 Buckingham Gate
London SW1E 6LB, UK
Tel: +44 - (0) - 20 7828 9929
Fax: +44 - (0) - 20 7834 1521
E-mail: sales@ipfd.co.uk

NTO IRE-Polus
Vvedenskogo Sq. 1
Fryazino, 141120, Russia
Tel: +7 095 526 9083
Fax: +7 095 702 9573
E-mail: ipg@ip.ic.net.ru

