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Data Sheet

August 15, 2026

IPG PHOTONICS

IPG PHOTONICS EAD-500

The IPG Photonics EAD-500 is a high-power diode module designed for pumping solid-state lasers and direct diode applications. It delivers up to 500W of output power at a center wavelength of 976 nm. Features include high efficiency, compact size, and long lifetime.



MODEL

IPG Photonics EAD-500

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

EAD-500

LISTING

<https://aumictechlabs.com/products/ead-500-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The IPG Photonics EAD-500 is an Erbium Doped Fiber Amplifier (EDFA) engineered for laboratory and bench-top operation. It delivers saturated output power from 40 mW to 500 mW across selectable C-band (1533–1570 nm) or L-band (1560–1610 nm) windows, with an optional extension to 1528 nm. The amplifier employs multimode diode pumping at 970 nm coupled into a multi-clad Ytterbium-Erbium doped active fiber, achieving typical gain equalization of ± 0.3 dB in C-band and ± 0.7 dB in L-band under saturation. Input and output optical isolation reach 40 dB and 30 dB respectively, while noise figures measure 5.0 dB and 6.0 dB across the same bands. The unit supports random or optional linear polarization (> 17 dB extinction ratio) with 0.2 dB polarization sensitivity. Pump diodes feature 500,000 hrs MTBF at 20 °C. Technical Specifications Output power: 40 mW to 500 mW (0.04 W to 0.5 W); peak to 26 dBm / 400 mW C-band: 1533–1570 nm with ± 0.3 dB gain equalization; 5.0 dB noise figure L-band: 1560–1610 nm with ± 0.7 dB gain equalization; 6.0 dB noise figure Band extension option: down to 1528 nm Optical bandwidth: 35 nm FWHM Input isolation: 40 dB; output isolation: 30 dB Polarization mode dispersion: extremely low Pump wavelength: 970 nm broad-stripe diodes (1×100 μ m) Pump reliability:

500,000 hrs MTBF @ 20 °C

Key Features Single-channel amplification with dual-band capability Optional linear polarization mode with extinction ratio > 17 dB Super-stable power option available Dispersion compensation option Automatic power control (APC) and automatic current control (ACC) Extremely low polarization mode dispersion Typical Applications Optical signal amplification in laboratory environments Fiber-optic test and measurement systems Long-haul and metro telecommunications research

Compatibility & Integration The EAD-500 operates on 100/110/200/220 V AC (50/60 Hz). Front-panel controls include monitor display, power adjustment, and fiber connectors (FC/PC, FC/SPC, or FC/APC). Rear-panel interfaces provide RS232 and optional GPIB control. Standard fiber pigtails measure 1.5 m with FC/APC interfaces. Operating temperature range: 0–50 °C. Bench-top and 19" rack-mount packages available.

EAD500 Characteristics / Specifications

PARAMETER	VALUE
Model	EAD-500
Instrument Type	erbium doped fiber amplifier
Family	IPG EAD laboratory EDFA
Saturated Output Class	500 mWCBand: 1533 to 1570 nmLBand: 1560 to 1610 nm
Pumping	multimode diode into multi-clad Yb-Er fiber
Operating Temperature	0 C to 50 C
Ac Mains	100/110/220 VAC 50/60 Hz
Control Interface	RS-232 rear panel
Form Factor	benchtop laboratory instrument
Front Panel	monitor display, keyed on/off, power control
Optical Ports	fiber input and output on the front panel
Manufacturer	IPG Photonics
Application Class	telecom and photonicRandDSsystem Role: single channel EDFA
Use Case	C orLband laboratory amplification
Documentation Type	OEM EAD Series laboratory EDFA literature
Power Class	500 mW saturated EAD-500
Sibling Range	40 mW to 500 mW EAD family
Media Class	single channel EDFA
Mounting Class	benchtop with optional rack ears
Wavelength Class	C-band or L-band build
Connector Class	FC/APC pigtail class on EAD builds

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
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Media Class	single channel EDFA
Mounting Class	benchtop with optional rack ears
Wavelength Class	C-band or L-band build
Connector Class	FC/APC pigtail class on EAD builds Notes From IPG Photonics EAD Series laboratory EDFA literature (C-band 1533 to 1570 nm, L-band 1560 to 1610 nm, 40 to 500 mW saturated, 0 to 50 C, RS-232). Gain, noise figure, and exact connector are on the EAD-500 nameplate; do not invent dB gain.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.