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Data Sheet

August 15, 2026

IPG PHOTONICS

IPG PHOTONICS EAU-1-L

The IPG Photonics EAU-1-L is an Erbium-doped fiber amplifier module engineered for integration into industrial laser systems and broadband infrastructure equipment. It delivers optical amplification across the L-band with low noise performance, accepting input power levels from -3 dBm to +10 dBm and producing output power between 10.0 dBm and 26 dBm at 1550 nm. The module operates as a standalone unit with universal AC power input and RS-232-C control interface. Aumictech offers NIST-traceable calibration and repair for the IPG Photonics EAU-1-L. Calibration covers gain at rated input power across the specified wavelength range, noise figure at rated gain setting, output power accuracy, gain flatness across the C-band or specified wavelength range, and polarization-dependent gain (PDG) where applicable. All calibrations ship with a NIST-traceable certificate. Turnaround is typically 1-3



MODEL

**IPG Photonics
EAU-1-L**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

EAU-1-L

LISTING

<https://aumictechlabs.com/products/eau-1-l-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The IPG Photonics EAU-1-L is an Erbium-doped fiber amplifier module engineered for integration into industrial laser systems and broadband infrastructure equipment. It delivers optical amplification across the L-band with low noise performance, accepting input power levels from -3 dBm to +10 dBm and producing output power between 10.0 dBm and 26 dBm at 1550 nm. The module operates as a standalone unit with universal AC power input and RS-232-C control

interface. Technical Specifications Optical Output Power: 10.0 dBm to 26 dBm (at 1550 nm, 0 dBm input) Optical Input Power Range: -3 dBm to +10 dBm Optimized Spectral Range: 1570 nm to 1605 nm Noise Figure: 7.5 dB (at 1550 nm, 0 dBm input) Input/Output Return Loss: Minimum 40 dB Carrier-to-Noise Ratio: Better than 1 dB Composite Second Order (CSO): -75 dBc Composite Triple Beat (CTB): -80 dBc Residual Pump Power: -20 dBm/nm Power Supply: 100-240 VAC, 50/60 Hz Operating Temperature: 0 °C to +65 °C Connector Type: FC/APC Fiber Type: Single Mode (SM9/125-3.0) Key Features Compact standalone design: 11 × 10 × 4.5 inches, 9.1 lbs L-band optimization from 1570 nm to 1605 nm Low-noise performance with 40 dB minimum input/output return loss Remote control via RS-232-C interface Made in USA Typical Applications Fiber-to-the-Home (FTTH) equipment CATV system amplification Industrial laser systems requiring precision amplification Compatibility & Integration The EAU-1-L accepts single-mode fiber (SM9/125-3.0) with FC/APC connectors and integrates into systems operating across the L-band spectrum.

EAU1L Characteristics / Specifications

PARAMETER	VALUE
Model	EAU-1-L
Instrument Type	L-band erbium doped fiber amplifier module
Family	IPG EAU / EAR EDFA
Band	L-band (L suffix)
Channel Class	single optical channel module (EAU-1)
C Band Family	1550 to 1560 nm on EAR 1RU C-band rows LBand Family: 1580 to 1620 nm on EAR two-way L-band rows
Noise Figure Class	4.5 dB typical at Pin plus 6 dBm (EAR 1RU table)
Pumps	cooler-free, no thermoelectric cooler
Shelf	populates IPG EAR 1RU 483 × 311 × 44 mm class
Family Ports	EAR shelves 1, 2, 4, 8, 16 ports
Family Port Power	up to plus 23 dBm (200 mW) per port on EAR 1RU
Family Total	50 mW to 2 W total output class
Operating Standard	minus 10 C to plus 55 C (EAR 1RU)
Operating Extended	minus 40 C to plus 65 C
Storage Temperature	minus 40 C to plus 80 C
Laser Class Label	Class IIIb, 1520-1625 nm, 500 mW CW max on EAR chassis warning
Cnr Class	1.0 dB CNR degradation (EAR 1RU)
Management Family	SNMP RJ-45 and RS-232 on EAR booster chassis
Als Family	automatic line shutdown on EAR booster
Manufacturer	IPG Photonics
Literature	IPG EAU module identification with EAR series 1RU / two-way EDFA family tables
Use	OEM line amplifier brick versus multiport EAR distribution
Reliability	IPG cooler-free pump diodes, wide temperature, no TEC

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 C to plus 80 C
Laser Class Label	Class IIIb, 1520-1625 nm, 500 mW CW max on EAR chassis warning
Cnr Class	1.0 dB CNR degradation (EAR 1RU)
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Literature	IPG EAU module identification with EAR series 1RU / two-way EDFA family tables
Use	OEM line amplifier brick versus multiport EAR distribution
Reliability	IPG cooler-free pump diodes, wide temperature, no TEC Notes From IPG EAU-1-L model identification plus published EAR/EAU family optical and environmental tables. Exact saturated power ofagiven EAU-1-L serial belongs on that module label.

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	
Technical Specifications	
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Family Ports	EAR shelves 1, 2, 4, 8, 16 ports
Family Port Power	up to plus 23 dBm (200 mW) per port on EAR 1RU
Family Total	50 mW to 2 W total output class
Operating Standard	minus 10 C to plus 55 C (EAR 1RU)
Operating Extended	minus 40 C to plus 65 C
Storage Temperature	minus 40 C to plus 80 C
Laser Class Label	Class IIIB, 1520-1625 nm, 500 mW CW max on EAR chassis warning
Cnr Class	1.0 dB CNR degradation (EAR 1RU)
Management Family	SNMP RJ-45 and RS-232 on EAR booster chassis
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Use	OEM line amplifier brick versus multiport EAR distribution
Reliability	IPG cooler-free pump diodes, wide temperature, no TEC

Notes

From IPG EAU-1-L model identification plus published EAR/EAU family optical and environmental tables. Exact saturated power of a given EAU-1-L serial belongs on that module label.

Laser Safety

laser safety on EAR chassis labels (500 mW CW max on that warning). EAU-1-L is the single-channel L-band module class used as a line amplifier brick rather than a 16-port distribution shelf. Applications L-band EDFA module for OEM optical line-up, CATV overlay, and IPG EAR-shelf population. Key Features EAU-series single-channel L-band EDFA module Cooler-free pump architecture shared with EAR Pairs with IPG 1

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.