

# EAR Series: Booster EDFA Amplifiers

## Fiber Amplifiers for Long Haul Systems



### Applications

- ▶ Long-haul DWDM Applications
- ▶ Long-haul Single-channel Applications
- ▶ Low Power SFP Interfaces
- ▶ High Security Long Length Spans



### Features

- ▶ Output Power as high as +33 dBm
- ▶ Supports DWDM or Single-channel Operation
- ▶ Hot-swappable Redundant Power Supplies
- ▶ Automatic Line Shutdown (ALS)
- ▶ Cooler-free Pumps for Higher Reliability and Lower Power Consumption
- ▶ SNMP Capable with Remote Communication and Control
- ▶ NEBS Level 1 Compliant Design

**IPG Photonics' EAR Series Booster Erbium Doped Fiber Amplifiers (EDFA)** provides up to +33 dBm total output power for long-span single-channel and DWDM links. EAR Series booster amplifiers can be combined with RLT Series Raman pumps to support even greater distances without needing repeaters. All IPG amplifiers and lasers are manufactured using IPG's high power pump laser diodes, which operate over a wide temperature range and without thermoelectric coolers (TEC).

The front panel has an RS 232 craft interface as well as RJ-45 ports for SNMP-based communication and control. Alarms are displayed through easy-to-read LEDs. IPG's ALS option provides continuous monitoring of link integrity and will shut down the high power optical signal in the event of a break. The ALS system senses when the link is reestablished and will restart the system automatically. The Pre-amp & Booster chassis supports an optical margin of up to 59 dB.

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### Optical Characteristics

	Booster Value	Pre-amp & Booster Value
Max. Output Power per Port*, dBm	Up to +33	Up to +25
Monitor Port Output Power, dBm	0	0
Operating Wavelength Range, nm	1540-1565	1550-1560
Max. Noise Figure (Pin= +6 dBm), dB	9	6
Max. Power Consumption, W	<80	<50

\*Other output powers available upon request

### General Characteristics

Chassis Dimensions, mm	1RU: 483 x 311 x 44 2RU: 483 x 366 x 88
Ambient Operational Temperature Range, °C	Standard: -10 to +55 Extended: -40 to +80

IPG’s EAR Series Booster amplifiers are the ideal solution for long-haul applications requiring amplification of single optical channel or DWDM. IPG’s proprietary multi-mode side-pump technology increases scalability while reducing component count. IPG combines pumps in a high power redundant design with intrinsic “soft-fail” characteristics to assure you have the optimal amplification solution to match your network’s requirements. IPG amplifiers can be packaged in a module format for OEM applications (EAU version) or with driver and control electronics in a 19 inch horizontal rack mount chassis (EAR version). Analog or microprocessor PCBs with AGC, APC, ACC and other functions are available, as well as a full range of options including optical connectors, extended temperature range, transient control, optical supervisory channel and other customized functionality. Private labeling is available; contact IPG for more information.

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