

EAU-W Series

Erbium Amplifiers for C-band and L-band WDM Applications

Performance

The EAU-W Series of high power erbium amplifier modules are optimized for WDM applications in the C- and L-bands. EAU-W Series amplifiers feature low noise, flat gain, low polarization mode dispersion (PMD) and low polarization dependent loss (PDL) over a wide wavelength range. EAU-W Series amplifiers meet the requirements of Telcordia GR-1312.

EAU-W Series modules are available in pre-amplifier, line, and booster configurations and allow for mid-stage access for Dispersion Compensating Modules (DCMs) and Optical Add/Drop Multiplexers (OADMs). The EAU Series amplifiers are available in a module format for OEM applications, or packaged along with driver and controls electronics in a 1-RU 19-inch rack mount case.



Features

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1529 -1564 nm Bandwidth

Powers from 100 mW to 2 W

Low Noise Figure and PDG

Compact Module or Rack Packaging

VOA & Mid-Stage Access Options

Cooler-Free Pump Operation

High Performance-to-Cost Ratio

For: Broadband, Long-Haul, Metro and Submarine Applications

Engineering Support

All IPG Photonics amplifiers are supported by our experienced team of engineers and scientists. IPG Photonics' technical staff will work with OEM customers to customize packaging, electrical connections and optical performance as required. Equipment manufacturers can leverage IPG Photonics' customization capabilities to improve the performance and time to market of new product releases.

Technology

IPG's patented side-pump technology reduces component count, increases reliability and significantly decreases overall amplifier cost. EAU-W modules are pumped with high-reliability multi-mode laser diodes, producing stable amplification without the need for thermo-electric cooling. IPG Photonics combines these diodes in a high power, redundant design with intrinsic "soft-fail" characteristics, providing the multi-layered reliability required in a network building block.

All IPG amplifiers are offered on a semi-custom basis. For exact specifications, contact IPG to discuss your requirements.



Typical Performance

Parameters	Condition	Unit	-100- λ -W	-200- λ -W	-500- λ -W	-1- λ -W
Composite Output Power**		dBm	20	23	27	30
Nominal Gain			17-23	20-26	24-30	27-33
Noise Figure	Pin = 0 dBm	dBm	< 5	< 5.5	< 5.5	< 6
Gain Flatness		dB	± 0.3	± 0.4	± 0.5	± 0.5
Operating Wavelength Range		nm		• 1529-1564		
• λ = C-Band		nm		• 1570-1605		
• λ = L-Band						
PDG	Typical	dB		0.3		
PMD	Max	ps		0.4		
Input/Output Optical Isolation		dB		35		
Input/Output Return Loss		dB		45		
Residual Pump Power		dB		-35		
Operational Temperature Range		$^{\circ}\text{C}$		-10 to +70		
Storage Temperature		$^{\circ}\text{C}$		-40 to +85		

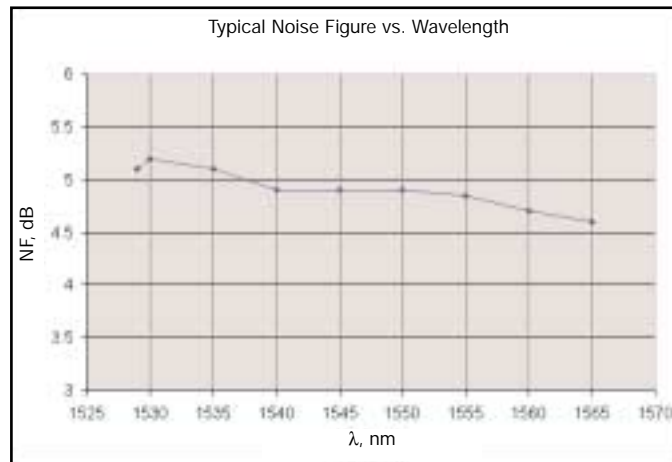
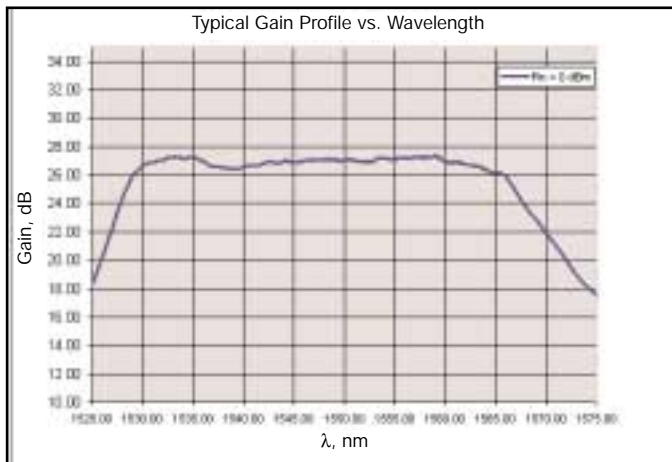
* λ = C- or L-

**Other powers available. Contact IPG for detailed specifications.

Exact dimensions depend on power levels and on packaging choices.

Packaging Choices: All IPG amplifiers are available in one of two configurations.

- Compact module, with optional heat sink
- 19" 1RU horizontal rack-mount



CAUTION: USE OF CONTROLS, ADJUSTMENTS AND PROCEDURES OTHER THAN THOSE SPECIFIED MAY RESULT IN HAZARDOUS LASER RADIATION EXPOSURE.

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