

EDPA-1550-R



Erbium-Doped Pulse Amplifier, 36 dBm

The Optilab EDPA-1550-R Erbium-Doped Pulse Amplifier is designed to amplify optical pulses up to 3 kW peak power. The EDPA-1550-R has triple stages of amplification with optical gain up to 50 dB. Based on multi-mode pumping Er/Yb double clad fiber technology, EDPA-1550-R is designed to produce high output power while minimize the back reflection. Customized optical filters are incorporated to reduce Amplified Spontaneous Emission (ASE) noise. The EDPA-1550-R has an output power level of up to +36 dBm at CW mode. The fiber output port can be lensed fiber, FC/APC or collimator. It is equipped with an LCD display screen and front panel knob for easy user interface control or remote control via USB. The Optilab EDPA-1550-R can be customized to various pulse applications. Contact Optilab for more information.

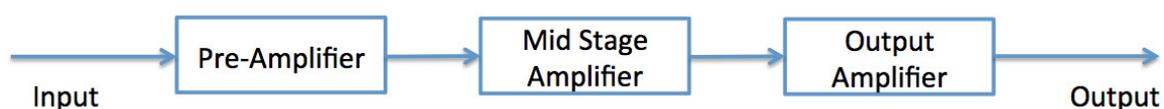
Features

- Amplifies from 1540 nm to 1570 nm
- Designed for pulse amplification
- Compact 1 RU housing
- Triple stage design, up to 50 dB gain
- Pulse energy up to 20 μ J
- Peak power up to 3 kW
- Collimated or lensed output available

Applications

- LIDAR pulsed source
- Material analysis
- Free space communication
- Raman distributed sensing
- Research & Development
- Testing & Measurement

Functional Diagram



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OPTIONS

EDPA-1550-R-XX

XX
CO: collimator
LN: lensed fiber
None: bare
FA: FC/APC

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

WEB ORDER

To order, please visit OEQuest.com.



Optilab Advantage

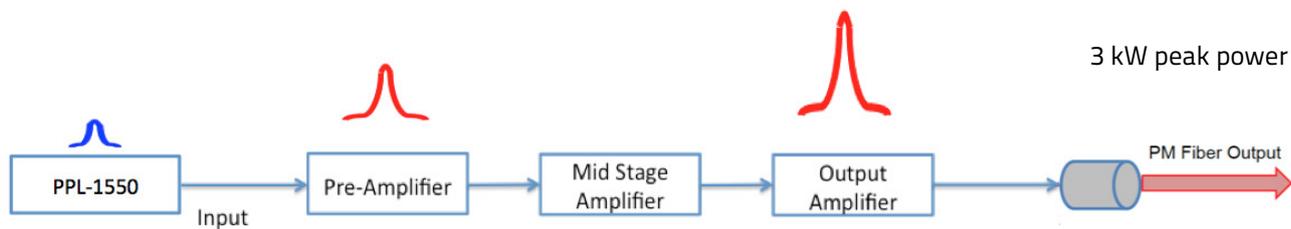
- Innovation
- Performance
- Quality
- Customization
- Warranty

| Optical Specifications | |
|-------------------------------|---|
| Operating Wavelength Range | 1540 nm to 1570 nm |
| CW Output Power | 36 dBm typ. |
| Amplifier Stages | Three |
| Input Signal Range | -20 dBm to 0 dBm |
| Optical Gain | Up to 50 dB |
| ASE Filtering | Internal |
| Output Stability (short term) | ± 0.25 dB |
| Polarization Design | Single mode output |
| Output Isolation | > 30 dB |
| Optical Input | FC/APC |
| Optical Output | Options: FC/APC, Armored SM fiber, or collimated output |
| Pulsed Operation | |
| Pulse Repetition Rate | 5 kHz to 1 MHz |
| Input Pulse Width | 50 ps to 1 μs |
| Peak Power (1 ns p.w.) | Up to 3 kW @ 700 kHz rep. rate |
| Peak Power (100 ns p.w.) | 200 W @ 100 kHz rep. rate |
| Pulse Energy (100 ns p.w.) | 20 μJ @ 100 kHz rep. rate |
| Mechanical Specifications | |
| Operating Temperature | 0 °C to +50 °C |
| Storage Temperature | -40 °C to +70 °C |
| Humidity | 10% to 90% |
| Power Supply | 110 V AC and 220 V AC, 50 or 60 Hz |
| Power Consumption | 40 W max. |
| Cooling | Fan ventilation |
| Display | LCD display, temperature, current, pump current |
| Controls | Front panel and USB for pump laser power |
| Monitoring | Output power through front panel and remote control |
| Communication Interface | USB interface cabling via PC |
| Dimensions | 1 RU: 9.5" x 10.25" x 1.75" |

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EDPA-1550-R Application Example

Using a pulse generation source such as Optilab PPL-1550, EDPA-1550-R can be configured to amplify pulses to 5 kW peak power through its collimating lens.



700 kHz repetition,
1 ns pulse width

Optical Pulse Before & After Amplification

