

# EDPA-1550-M



## Erbium-Doped Pulse Amplifier Module, 36 dBm

The Optilab EDPA-1550-M Erbium-Doped Pulse Amplifier is designed to amplify optical pulses up to 3 kW peak power. The EDPA-1550-M 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-M 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-M 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-M can be customized to various pulse applications. Contact Optilab for more information.

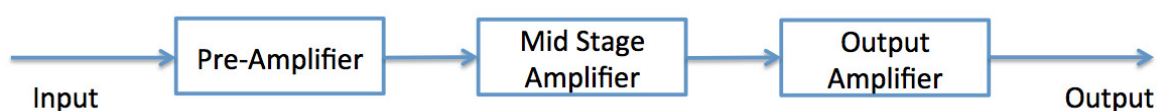
### Features

- Amplifies from 1540 nm to 1570 nm
- Designed for pulse amplification
- Compact module housing
- Triple stage design, up to 50 dB gain
- Pulse energy up to 20  $\mu$ 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-M-XX

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

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## WEB ORDER

To order, please visit [OEQuest.com](http://OEQuest.com).



## Optilab Advantage

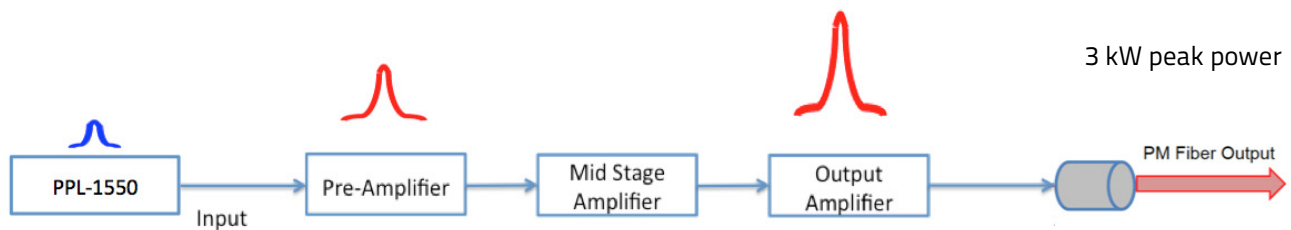
- Innovation
- Performance
- Quality
- Customization
- Warranty

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	+5.5 VDC, -5.5 VDC, +24 VDC, AC power supply included
Power Consumption	40 W max.
Cooling	Fan ventilation
Controls	USB for setting pump laser power
Monitoring	Output power through USB
Communication Interface	USB interface cabling via PC
Dimensions	230 x 250 x 70 mm

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## EDPA-1550-M Application Example

Using a pulse generation source such as Optilab PPL-1550, EDPA-1550-M 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

