



# EDPA-1550-M



## DEVICE

## Erbium-Doped Pulse Amplifier Module, 36 dBm

## OVERVIEW

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.

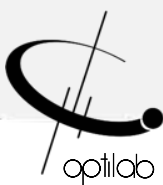
## FEATURES

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

## USE IN

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

## FUNCTIONALDIAGRAM





# EDPA-1550-M

## SPECIFICATIONS

Operating Wavelength Range	1540 nm to 1570 nm
CW Output Power	36 dBm typ.
Amplifier Stages	3
Input Signal Range	-20 dBm to 0 dBm
Optical Gain	Up to 50 dB
ASE Filtering	Internal
Output Stability (short term)	$\pm 0.25$ 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

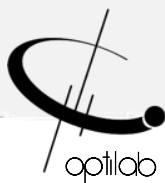
## GENERAL

## PULSED OPERATION

Pulse Repetition Rate	5 kHz to 1 MHz
Input Pulse Width	50 ps to 1 $\mu$ s
Peak Power (1 ns p.w.)	Up to 3 kW @ 700 kHz rep. rate
Peak Power (1 ns p.w.)	200 W @ 100 kHz rep. rate
Pulse Energy (100 ns p.w.)	20 $\mu$ J @ 100 kHz rep. rate

## MECHANICAL

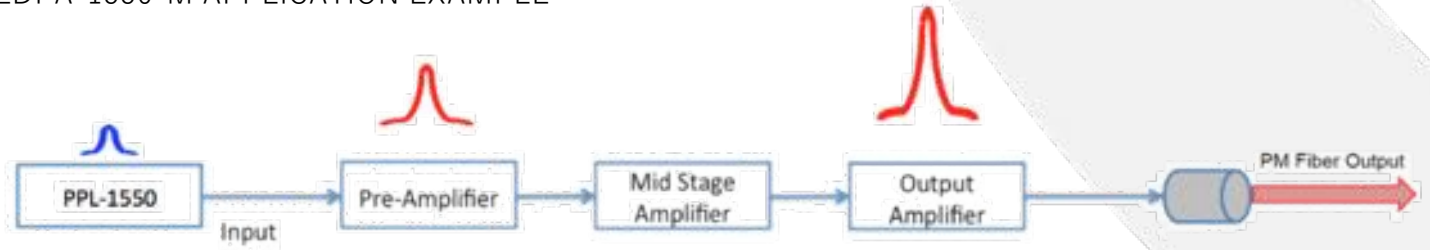
Operating Temperature	0°C to +50°C
Storage Temperature	-40°C to +70°C
Humidity	10% to 90%
Power Supply	+5.5 VDV, -5.5VDV, +24 VDV, AC power supply included
Power Consumption	40 W max.
Cooling	Fan ventilation
Controls	USB for setting pump laser power
Monitoring	Output power through USB
Communication Interface	USB interface cabling via PC
Dimensions	230 x 250 x 70 mm





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## EDPA-1550-M APPLICATION EXAMPLE



700 kHz repetition, 1 ns pulse width

## OPTICAL PULSE BEFORE AND AFTER AMPLIFICATION

