



# NPL-1550-37-R



DEVICE **1550 nm Nanosecond Pulsed Laser Rackmount, 200 W Peak Power**

OVERVIEW

The Optilab NPL-1550-37-R is a versatile high-power pulsed laser that is designed for research and development of LIDAR, DTS, OTDR or other pulse systems. This fully integrated unit consists of an electrical pulse generator, DFB laser at 1550nm, pre-amplifier, ASE filter and power amplifier. The Optilab NPL-1550-37-R can generate pulses up to 200W peak power, with pulse width settings from 5 ns to 1000 ns and the repetition rate selectable from 5 kHz to 1 MHz. This universal design creates thousands of combinations of pulse widths and repetition rates. With 100 ns pulse width, it provides a pulse energy of 20  $\mu$ J @ 100 kHz repetition rate. Designed with maximum flexibility, NPL- 37-B is either for a stand-alone pulsed laser source or can be integrated with other products. Contact Optilab for more information.

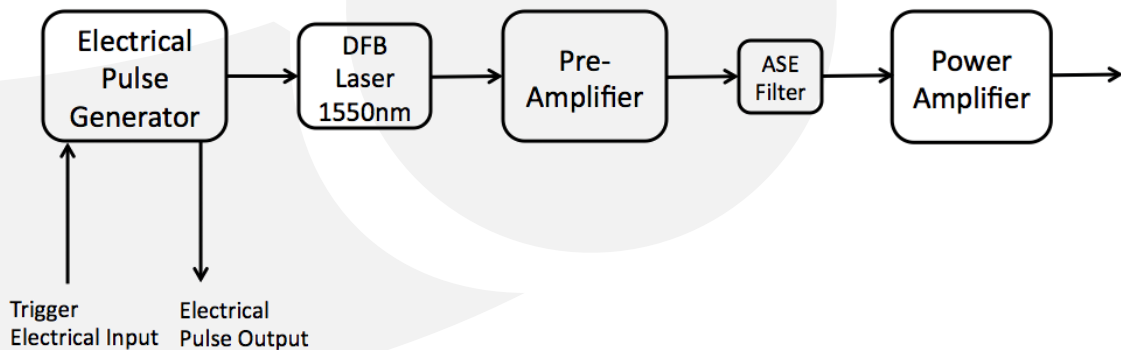
FEATURES

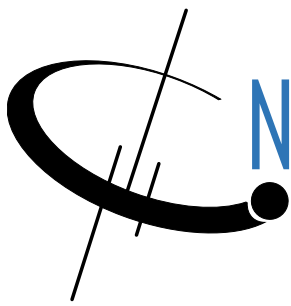
- MOPA design with 1550 nm seed laser
- Built in electrical pulse generation circuit
- Programmable pulse width: 5 ns to 1000 ns
- Adjustable repetition rate: 5 kHz to 1 MHz
- 20  $\mu$ J pulse energy @ 100 ns pulse width
- 200 W peak pulsed power
- 36 dBm CW output
- Electrical pulse output for triggering
- Easy to use LCD display front panel control

USE IN

- Pulsed light source for LIDAR
- Laser source for Distributed Sensor
- Pulse based optical instrumentation
- Raman distributed sensing
- Research and development
- Test and Measurement

FUNCTIONALDIAGRAM





# NPL-1550-37-R

## SPECIFICATIONS

Seed Laser Wavelength	1550 ± 10 nm
Laser Type	DFB 14 pin butterfly
Laser Linewidth	< 3 MHz
Optical Pulse Width	5 ns to 1000 ns (programmable, Also depends on the option)
Pulse Repetition Rate	5 kHz to 1 MHz (adjustable)
Input Trigger Level TTL	> 3.5 V
Amplifier Design	3 stages
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
Pulse Contrast Ratio	50 dB typ.
Peak Power (100 ns p.w.)	200 W @ 100 kHz rep. rate
Pulse Energy (100 ns p.w.)	20 µJ @ 100 kHz rep. rate
CW Output Power	36 dBm typ.
Output Fiber Type	SMF-28

## GENERAL

Optical Output	FC/APC, Armored SM fiber, collimate output optional
Operation Temperature	-10°C to +60°C
Storage Temperature	-40°C to +70°C
Humidity	10% to 90%
Power Supply	110/220 V AC, 2 A max.
Cooling	Fan ventilation
Communication Interface	USB
Mechanical Dimensions	482.60mm x 470.57mm x 132.00mm

## MECHANICAL

