

NPL-1550-M



1550 nm Nanosecond Pulsed Laser Module, 10-1000 ns, 100 Hz-1 MHz

The Optilab NPL-1550-M is a variable pulsed DFB laser source, a building block ideal for MOPA, LIDAR, OTDR laser systems development and applications. This fully integrated compact module contains a Distributed Feedback (DFB) laser and variable nanosecond pulse generation circuits. The NPL-1550-M provides 20 mW optical peak power in 1550 nm wavelength region, with a programmable pulse width from 10 ns to 1000 ns, and a selectable pulse repetition rate from 100 Hz to 1 MHz. The optical pulse generation can alternatively be controlled via an external electrical trigger. In a compact design, NPL-1550-M is applicable for OEM integration or as a stand alone pulsed laser source. Contact Optilab for more information.

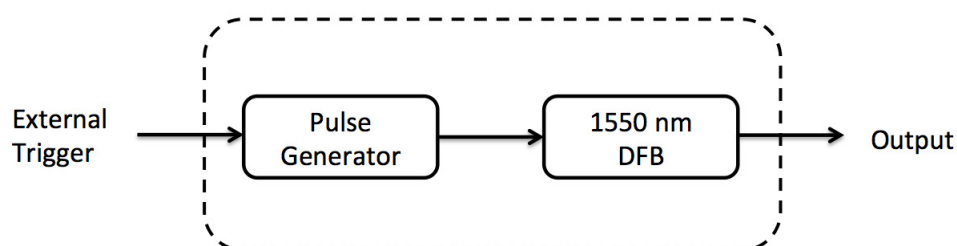
Features

- Standard wavelength: 1550 ± 10 nm
- 1310nm, L-band wavelengths available
- Requires no external pulse generator
- Pulse width: 10 ns to 1000 ns, programmable
- Selectable repetition rate: 100 Hz to 1 MHz
- 20 mW peak power
- RS-232 via USB control interface

Applications

- Master Oscillator (MO) for MOPA
- Pulsed light source for LiDar
- Laser source for OTDR
- Pulse based optical instrumentation
- Raman distributed sensing

Functional Diagram



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OPTIONS

NPL-XXXX-M-ZZ

XXXX Wavelength, 1310, 1550 and other.
 ZZ PM: Polarization Maintaining

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

WEB ORDER

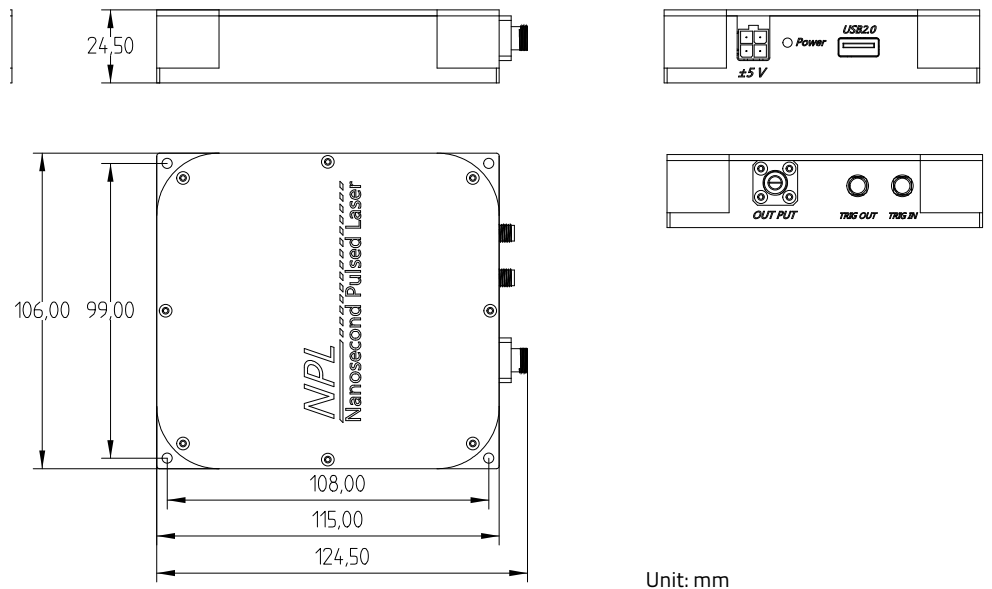
To order, please click below.



Optical Specifications	
Center Wavelength	1550 ± 10 nm
Optional Wavelength	1310 nm, 1570 nm to 1600 nm
Laser Type	DFB, FP available
Laser linewidth	< 3 MHz
Optical Pulse Width	10 ns to 1000 ns (selectable)
Pulse Repetition Rate	100 Hz to 1 MHz (selectable)
Pulse Contrast Ratio	50 dB typ.
Peak Optical Output Power	20 mW typ.
Input Trigger Level TTL	> 3.5 V
Trigger Connector	SMA female 50 Ω
Optical Connector	FC/APC, others available.
Mechanical Specifications	
Operating Temperature	-10° C to +60° C
Storage Temperature	-40° to +70° C
Humidity	10% to 90%
Power Supply	±5 V, 1A max.
Accessories	PS-5 Power supply and cable
Cooling	Passive
Communication Interface	RS-232 via USB 2.0
Output Fiber	SMF-28 or panda (PM)
Electrical DC Control	4-pin molex
Mechanical Dimensions	115 x 106 x 24.5 mm

Optilab Advantage Mechanical Drawing

- Innovation
- Performance
- Quality
- Customization
- Warranty



Unit: mm

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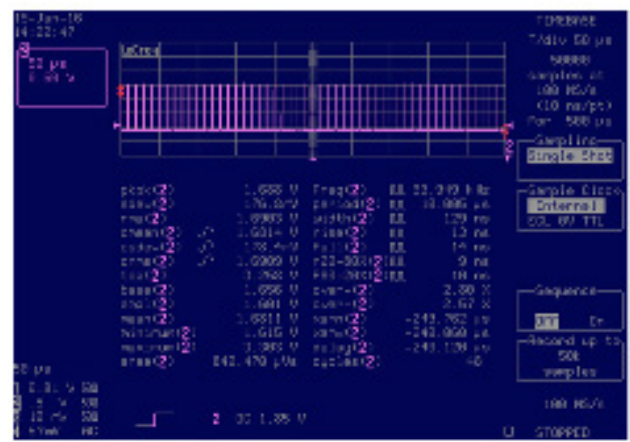
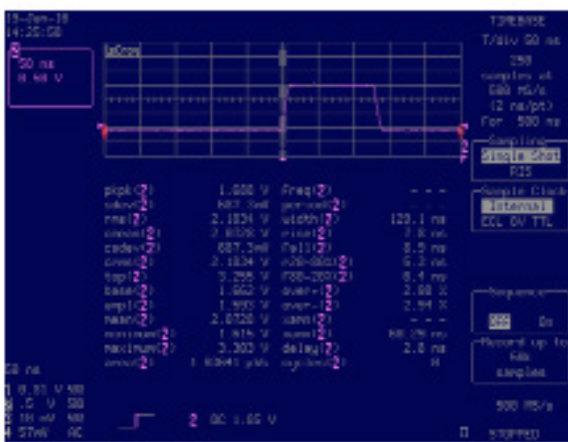
Sample Measurement Results

Pulse Width Range (ns)		Repetition Rate Range (kHz)		Wavelength (nm)	Average Output Power @ 100ns PW/100kHz RR (dBm)
Min	Max	Min	Max		
5	250	4	200	1547.23	-6.83

Pulse Width: 100ns	Output Power
Repetition Rate: 10 kHz	-16.84 dBm
Repetition Rate: 200 kHz	-3.82 dBm

Repetition Rate: 100 kHz	Output Power
Pulse Width: 10ns	-14.65 dBm
Pulse Width: 250ns	-3.39 dBm

Taken at Settings: Pulse Width: 100ns/ Repetition Rate: 100 kHz



Measurement Configuration



LabVIEW™ Screenshot

