

# NPL-DFB-XXXX-M



## DEVICE

## Nanosecond Pulsed Laser Module, TEC Cooled DFB, 10-1000 ns, 100 Hz – 1 MHz

## OVERVIEW

The Optilab NPL-DFB-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-DFB-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-DFB-M is applicable for OEM integration or as a stand alone pulsed laser source. The NPL-DFB-XXXX-M requires a single  $\pm 5$  Volt DC power supply for operation. Contact Optilab for more information.

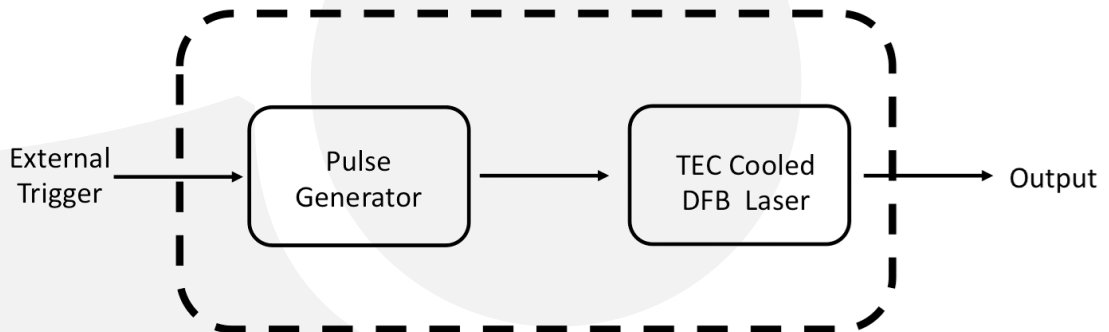
## FEATURES

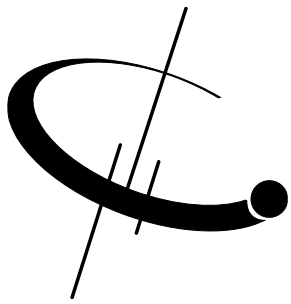
- Standard Wavelength: 1550 +/- 20 nm
- Requires no external pulse generator
- RS-232 via USB control interface
- O band wavelengths available upon request
- Pulse width: 10ns to 1000ns, programmable
- Selectable repetition rate: 100 Hz to 1 MHz
- 20 mW peak power @ 10 ns pulse width

## USE IN

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

## FUNCTIONAL DIAGRAM





# NPL-DFB-XXXX-M

## SPECIFICATIONS

Center Wavelength	1550 ± 20 nm
Optical Wavelength	1310 nm, 1550 nm
Laser Type	DFB
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

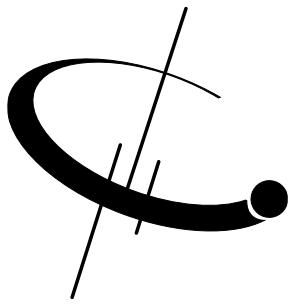
## GENERAL

Operating Temperature	-10°C to +60°C
Storage Temperature	-40°C to +70°C
Humidity	10% to 90%
Power Supply	± 5 V, 1 A 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

## MECHANICAL

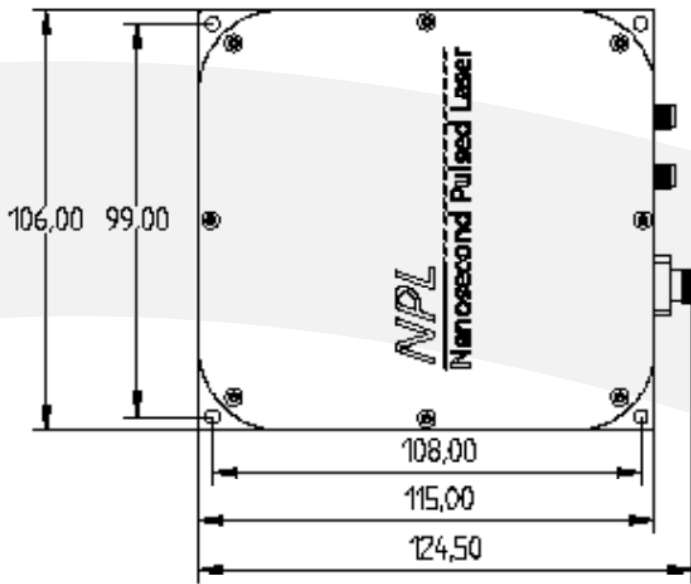
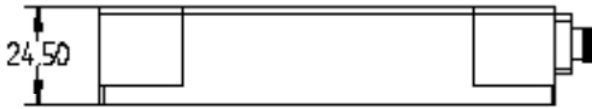


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# NPL-DFB-XXXX-M

MECHANICAL DRAWING



Unit: mm

