

## Optical Pulse Generator

Negoh-Op Technologies Ltd. introduces its optical pulse/signal generator modules (OPG) with bandwidth of more than 100 MHz, peak power of output signal larger than 20mW and pulse width from 10ns to CW at 1550nm wavelength. OPG modules with similar performances are also available at wavelengths of 1480nm, 1300nm, 1064nm, 980nm, 830nm and 650nm. The sources are DFB or FP diode lasers which are stabilized in its frequency and output power. The OPGs modules are a turn key solution, which provides superb performances in stability quality through a single mode fiber output, and could be purchased with different polarization states, including a 2mW SLD non-coherent version.

### Applications:

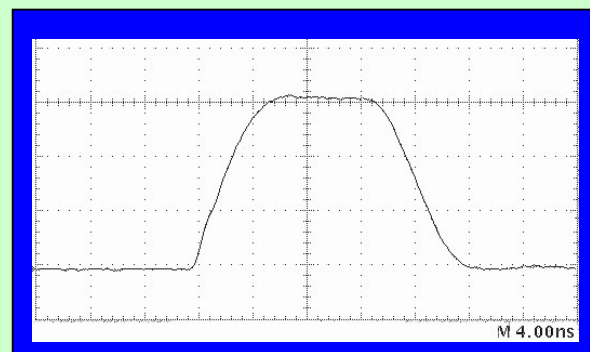
- *Testing Equipment for sensors and receivers*
- *Labs*

### Key features:

- *Wavelengths: 650nm - 1600nm*
- *Peak power: up to 100 mW*
- *Bandwidth: >100 MHz*
- *Pulsewidth: 10 ns up to CW*
- *Output: fiber-coupled*
- *Any pulse shape*

### Options:

- *Linearly polarized output (EXR>25dB)*
- *Random polarized output*
- *Depolarized output (DOP<5%)*
- *Non-coherent output (SLD source)*



For OPG purchase orders with specific wavelength and polarization state, the customer should order **OPG-WL-P**, where WL is the wavelength and P is the requested Polarization state. (P=Polarized, R=Random, D=Depolarized, N=Non-coherent). For example **OPG-1550-P** is a module at 1550nm with Polarized output.

## OPG Specifications:

Described below are Negoh-Op OPG module specifications at 1550 nm.

Other Modules at wavelengths between 650nm to 1560nm are also available, and have similar optical, electrical and mechanical specifications.

Parameter	Specification (typical)	Unit	Notes
<b>Optical</b>			
Central wavelength <sup>[1]</sup>	1550±5	nm	Other wavelengths between 650nm to 1600nm are available
Maximum output power <sup>[2]</sup>	100	mW	20-100 mW wavelength dependent
Pulse width	10 to CW	ns	
Output Polarization	≥25 - ≤5 20	dB - % μm	<ul style="list-style-type: none"> <li>▪ Linearly polarization</li> <li>▪ Random polarization</li> <li>▪ Depolarized</li> <li>▪ Non-coherent (2mW SLD)</li> </ul>
Modulation signal frequency	DC to 100	MHz	
Power between pulses	-80	dB	At 0V input
Modulation dynamic range	> 20	dB	
Time drift (WL)	≤ 0.1	nm	For DFB source
Temperature drift (WL)	≤ 0.1	nm	For DFB source
Output power stability	2	%	Within 2 hours
Rise time/ fall time	≤ 3	nsec	
<b>Electrical</b>			
Modulation Input Voltage	0-5	V	Optional different voltage range
Modulation input impedance	50	ohm	
Modulation signal	Arbitrary	-	
Main AC supply	220/50	V/Hz	110V is optional
<b>Mechanical</b>			
Output optical interface	FC/PC single mode		Other connectors are optional
Modulation input connector	BNC		
Dimensions	380X280X95	mm <sup>3</sup>	Optional smaller dimensions
19" Rack mount adaptor	2U	-	Optional
Operating Temperature	-20 to +50	°C	

[1] Negoh-Op OPG may include an optional Red CW light source added into the fiber, for spatial alignment of OPG at IR wavelength region.

[2] Negoh-Op can supply an optical amplifier for amplifying OPG pulses at 1550nm up to output power of several watts.

## OPG Stability

