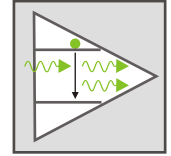
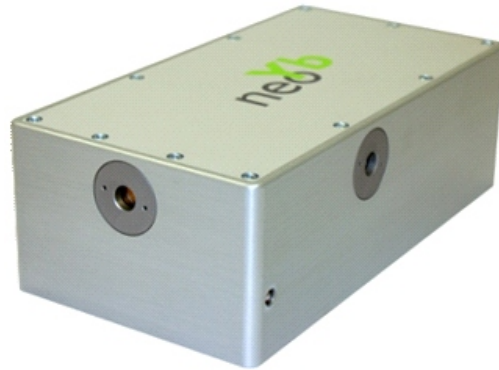


## Laser Amplifier Module



neoYb

### Boost Your Energy

The neo<sup>Yb</sup> is an OEM type solid-state laser amplifier module to boost the pulse energy or average output power for various applications. It is a stand-alone module containing amplifier and pump diode and is based on high reliable and long lifetime neoLase technology. The ultra-compact and nearly monolithic modules allow easy integration and cost effective upgrading of laser machines, scientific lasers or low power oscillators. It is the ideal power or energy booster for femtosecond laser systems.

### No Matter What!

The neoLase industrial amplifier modules allow CPA free amplification for bandwidth-limited pulses on smallest available foot print. This enables high peak power short pulse pico- or femtosecond lasers for a wide range of micromachining applications without complex compressor arrangements. The high gain pre-amplifier module allows direct amplification of mode-locked oscillators or gain switched diodes. The main amp modules are an ideal power or energy booster stage exceeding 50 W output power!

### neoYb Amplifier Module

#### Key features

Wavelength:	1030 nm
Output power	5 to 100 W
Mode of operation	cw to fs-pulses
Beam quality	TEM <sub>0,0</sub> / M <sup>2</sup> < 1.3

#### Advantages

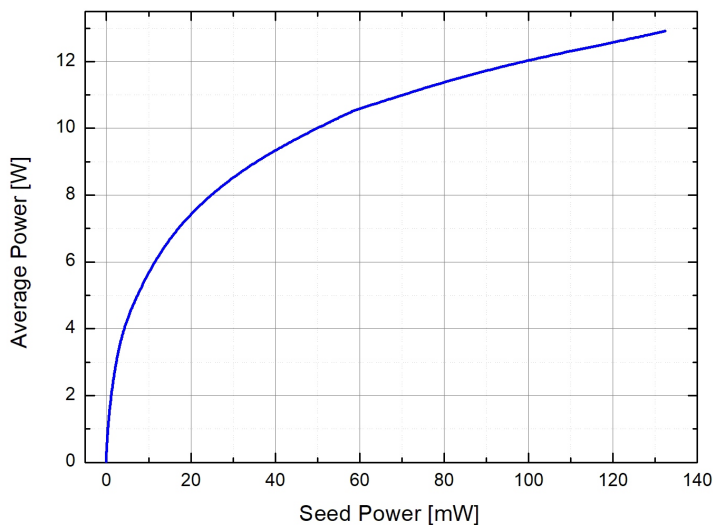
- Easy and compact energy or power boosting
- Highly flexible and scalable amplifier units
- Proven long term stability and industrial reliability

# System Specifications

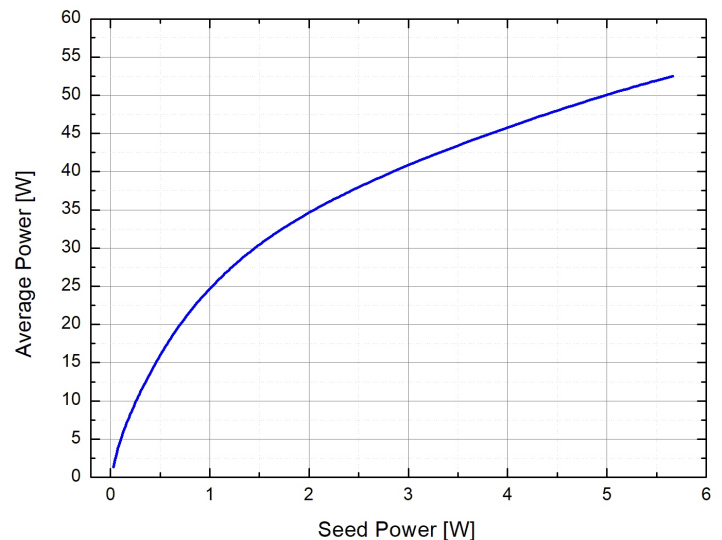
Amplifier stages	pre-amp	main-amp	combined
Typical input power	1 - 100 mW		1 - 10 W
Typical output power	1 - 10 W		20 - 60 W
Wavelength		1030 nm	
Beam quality		TEM <sub>0,0</sub> / M <sup>2</sup> < 1.3	
Supported Pulse Dur.*		< 700 fs	
Polarization ratio		> 100:1	
Pulse Energy		without stretching : > 50 μJ stretched to ~30 ps: > 500 μJ	
Dimensions (LxBxH, mm)		246 x 120 x 75	
Ampient temp.		15 - 35 °C	
Laser controller		19" Rackmount 3 U height	
Cooling		Water cooled	

\*Depending on seeder bandwidth and amplification factor

pre-amplifier performance



main amplifier performance



Example performance of a femtosecond amplifier.

## Input configuration:

- free-space /single-mode fiber FC connector
- Output performance and specifications depending on seed laser parameters.

- Notes:
1. Due to neoLASE continuous product improvement, all specifications are subject to change without notice.
  2. Laser light emitted from this system is invisible and will be harmful to the human eye. Proper laser safety eyewear must be worn during operation.

