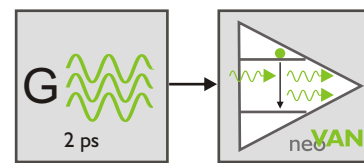


Picosecond Laser

NEW!



neoLASE MOPA Technology

neo**MOS**
pico

Catch the peak!

The neoMOS picosecond laser series combines the reliability and low maintenance of a state of the art picosecond laser oscillator with a solid-state amplifier. The new developed laser system further expands the neoMOS pulse duration range into the area of less than 2 ps. The CPA free technology allows for bandwidth limited pulses on a smallest available footprint.

Cold Laser Processing

The new neoMOS system with pulse durations of less than 2 ps enables new and more efficient laser material processing's. Whether micro material or nonlinear processing the short pulse duration supports cold and therefore highly precise laser material applications.

neoMOS picosecond Laser

Key features

Output power	5 W
Pulse duration	<2 ps
Pulse energy	up to 30 μ J
Repetition rates	single shot to 25 MHz
Beam quality	TEM _{0,0} / M ² < 1.3

Advantages

- Compact laser head design
- CPA free technologie

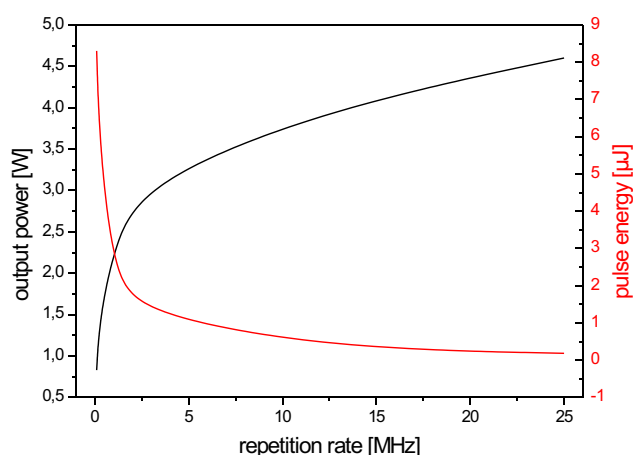
System Specifications

PRELIMINARY

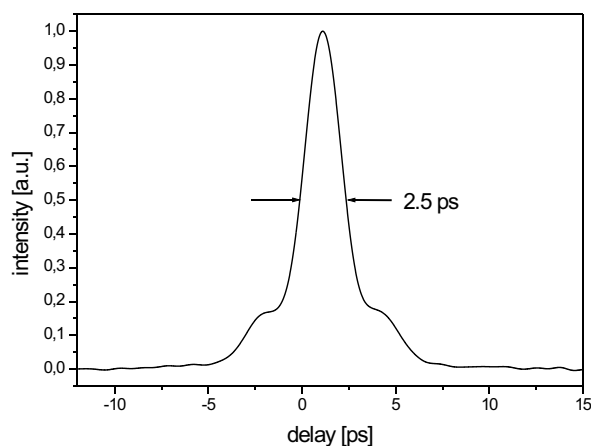
neo**MOS**_{pico}2ps

Seed Laser	Modelocked Fiber Oscillator
Pulse duration	<2 ps
Average power	5 W
Repetition rate	Single shot to 25 MHz
Max. pulse energy	30 μ J @ 1064 nm
Beam quality	TEM _{0,0} M ² < 1.3 / >85 % circularity
Power noise	< 1 % RMS
Polarization ratio	> 100:1
Warm-up time	<30 min.
Laser controller	19" Rackmount 4 U height
Cooling	Water cooled
Options	SHG

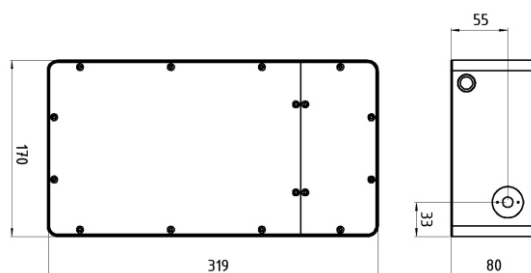
Typical Output Power and Pulse



Typical Autocorrelation



Dimensions Laser Head



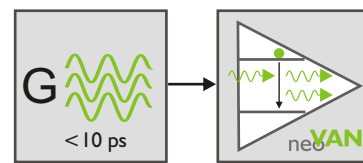
Output performance and specifications are depending on the used seed laser system and can be adapted on request.

Visit www.neolASE.com or email info@neolase.com for further information.

- 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.



Industrial Picosecond Laser



neoLASE MOPA Technology

neo**MOS**
pico

Compact and Powerful

The neoMOS picosecond laser series combines the reliability and low maintenance of state of the art picosecond oscillators with a solid-state amplifier. The ultra-compact laser head has the smallest footprint currently available enabling easy system integration. High stability and long lifetime are provided by design for 24/7 industrial use.

Precision Laser Processing

The multi-megawatt level peak-power and ultrafast pulses delivered by the neoMOS series are suitable for processing the most demanding materials including transparent glasses and plastics. Typical applications include photovoltaic and electronics production, display glass processing as well as security and decorative marking.

neoMOS picosecond Laser

Key features

Output power	up to 50 W @ 1064 nm
Pulse duration	< 10 ps
Pulse energy	up to 150 μ m
Repetition rates	single shot to 40 MHz / burst mode options
Beam quality	TEM _{0,0} / M ² < 1.3

Advantages

- Customized repetition rates and output power configurations
- Ultra-compact laser head design
- Proven long term stability and industrial reliability

System Specifications

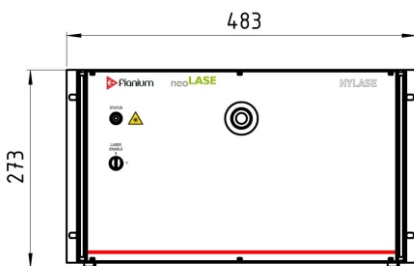
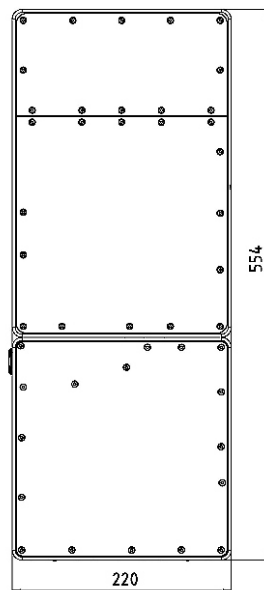
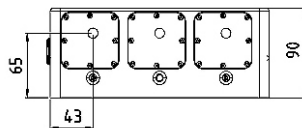
neo **MOS** pico 10ps

Seed Laser	Modelocked Fiber Oscillator
Pulse duration	< 10 ps
Average power	7 / 25 / 50 W
Repetition rate	Single shot to 40 MHz
Max. pulse energy	150 μ J @ 1064 nm (higher energy on request)
Beam quality	TEM _{0,0} M ² < 1.3 / > 85 % circularity
Power noise	< 1 % RMS
Polarization ratio	> 100:1
Warm-up time	< 30 min.
Laser controller	19" Rackmount 6 U height
Cooling	Water cooled
Options	SHG, Burst Mode

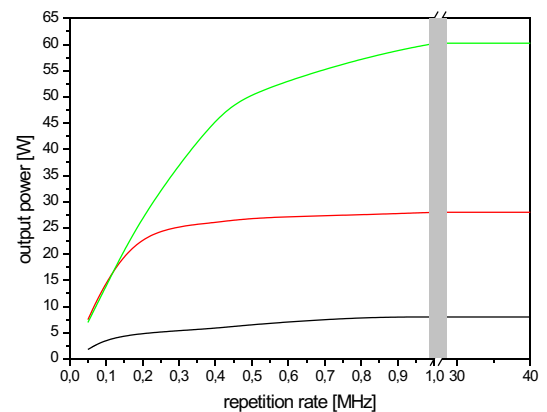
Dimensions Laser Head and Electronics

Basic Module:
25 W version
330 x 220 mm

50 W version /
beam expander / SHG option
554 x 220 mm



Typical Output Power and Pulse Energy



Output beam diameter: ~ 1 mm

User Interface:

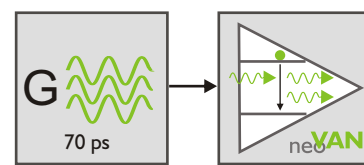
- PC GUI using network connection
- Ethercat Interface
- Other Interfaces on request

Visit www.neoLASE.com or email info@neolase.com for further information.

- 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.



Industrial Picosecond Laser



neoLASE MOPA Technology

neo**MOS**
pico

Compact and Powerful

The neoMOS picosecond laser series combines the reliability and low maintenance of a state of the art picosecond laser diode with a solid-state amplifier. Customized combinations with different output powers and flexibel repetition rates are integrated into a ultra-compact laser head enabling easy system integration. High stability and long lifetime are provided by design for 24/7 industrial use.

Flex Pulse

The multi-megawatt level peak-power and ultrafast pulses delivered by the neoMOS series are suitable for processing the most demanding materials including transparent glasses and plastics. The flexpulse technology allows to change the repetition rate and the pulse energy on the fly and therefore enables new potentials in laser control.

neoMOS picosecond Laser

Key features

Output power	15 W @ 1064 nm
Pulse duration	70 ps
Pulse energy	up to 250 μ J
Repetition rates	single shot to 80 MHz, flex pulse
Beam quality	TEM _{0,0} / M ² < 1.3

Advantages

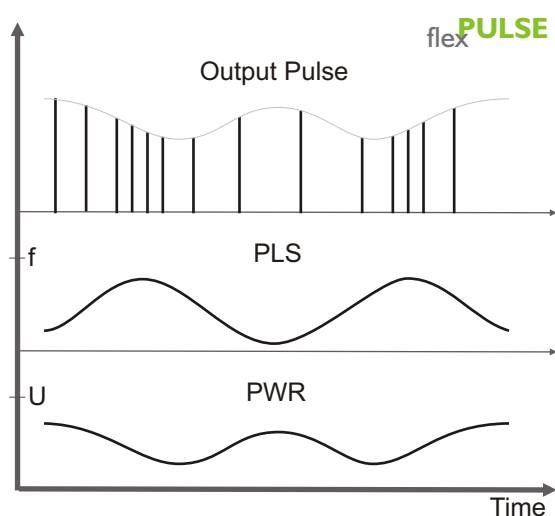
- Flexibel repetition rate and pulse energy
- Ultra-compact laser head design
- Proven long term stability and industrial reliability

System Specifications

neo **MOS** pico 70ps

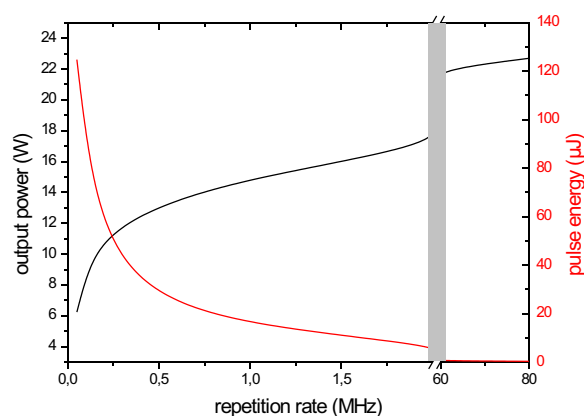
Seed Laser	Laser Diode
Pulse duration	70 ps
Average power	15 W
Repetition rate	Single shot to 80 MHz / free triggerable including burst mode
Max. pulse energy	250 μ J @ 1064 nm
Beam quality	TEM _{0,0} M ² < 1.3 / > 85 % circularity
Power noise	< 1 % RMS
Polarization ratio	> 100:1
Warm-up time	< 30 min.
Laser controller	19" Rackmount 6 U height
Cooling	Water cooled
Options	SHG

Flex Pulse Control

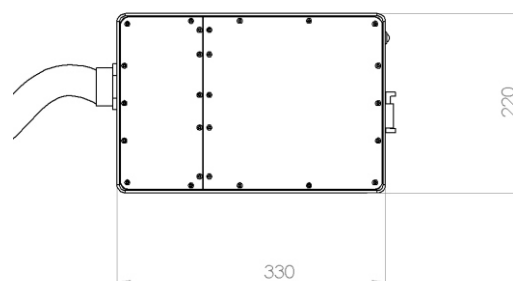


The flex pulse control allows separate and continuous change of lasers repetition rate and pulse energy by 5 V TTL (PLS) and 0 - 5 V analog signal (PWR).

Typical Output Power and Pulse Energy



Dimensions Laser Head



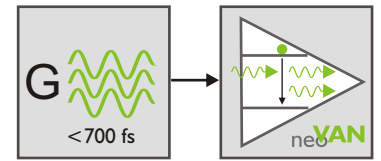
Visit www.neolASE.com or email info@neolase.com for further information.

- 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.



Femtosecond Laser

PRELIMINARY



neoLASE MOPA Technology

neo**MOS**

Catch the peak!

The neoMOS femtosecond laser series combines the reliability and low maintenance of a state of the art femtosecond laser oscillator with a solid-state amplifier. The new developed laser system further expands the neoMOS pulse duration range into the area of less than 700 fs. The CPA free technology allows for bandwidth limited pulses on a smallest available footprint.

Cold Laser Processing

The new neoMOS system with pulse durations of less than 700 fs enables new and more efficient laser material processing's. Whether micro material or nonlinear processing the short pulse duration supports cold and therefore highly precise laser material applications.

neoMOS picosecond Laser

Key features

Output power	> 10 W
Pulse duration	< 700 fs
Pulse energy	> 40 μ J
Repetition rates	single shot to MHz
Beam quality	TEM _{0,0} / M ² < 1.3

Advantages

- Compact laser head design
- CPA free technologie

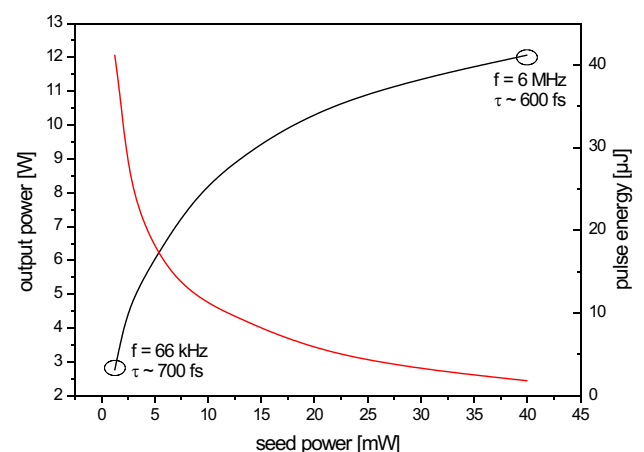
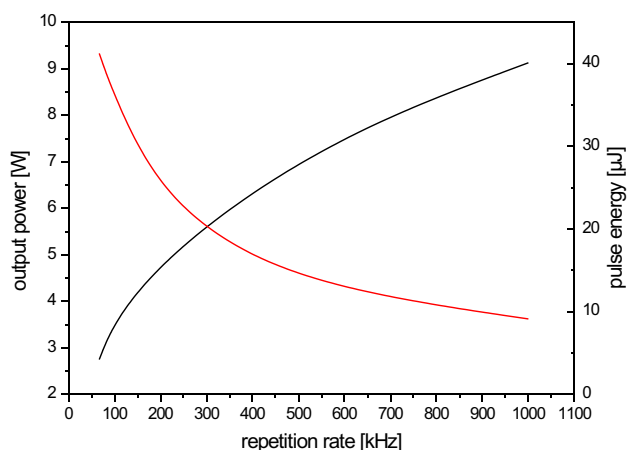
System Specifications

PRELIMINARY

neoMOS 700fs

Seed Laser	Modelocked Fiber Oscillator
Pulse duration	<700 fs
Average power	>10 W
Repetition rate	Single shot to MHz
Max. pulse energy	>40 μ J @ 1030 nm
Beam quality	TEM _{0,0} M ² <1.3 / >85 % circularity
Power noise	<1 % RMS
Polarization ratio	>100:1
Warm-up time	<30 min.
Laser controller	19" Rackmount 4 U height
Cooling	Water cooled
Options	SHG

Typical Output Power and Pulse Energy



Output performance and specifications are depending on the used seed laser system and can be adapted on request.

Housing specifications are depending on the level of integration. OEM amplifier configurations available.

Visit www.neolase.com or email info@neolase.com for further information.

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.

