

Welcome to the neoLASE laser-matrix

Based on industrial standards neoLASE provides high quality laser designs and electronics. The modular design allows to accomplish a variety of different laser parameters and electro-optical functionalities.

In terms of pulsed laser regimes neoLASE offers high pulse energy or average power MOPA system configurations from nano- to picosecond pulse durations. The MOPA systems combine the established neoLASE amplifiers with different laser oscillators.

The laser matrix gives an overview of integrated MOPA systems and customized laser solutions.

Choose your laser parameter by Pulse Energy or Average Power or learn how to configure a neoLASE MOPA System.

If you can't find the laser parameter of your need please contact us ! info@neolase.com

Average Power

100 W

50 W

10 W

1 W

Pulse Energy

10 mJ

1 mJ

100 μ J

10 μ J

Product Info

[linked to webpage](#)

Amplifiers



MOPA Lasers



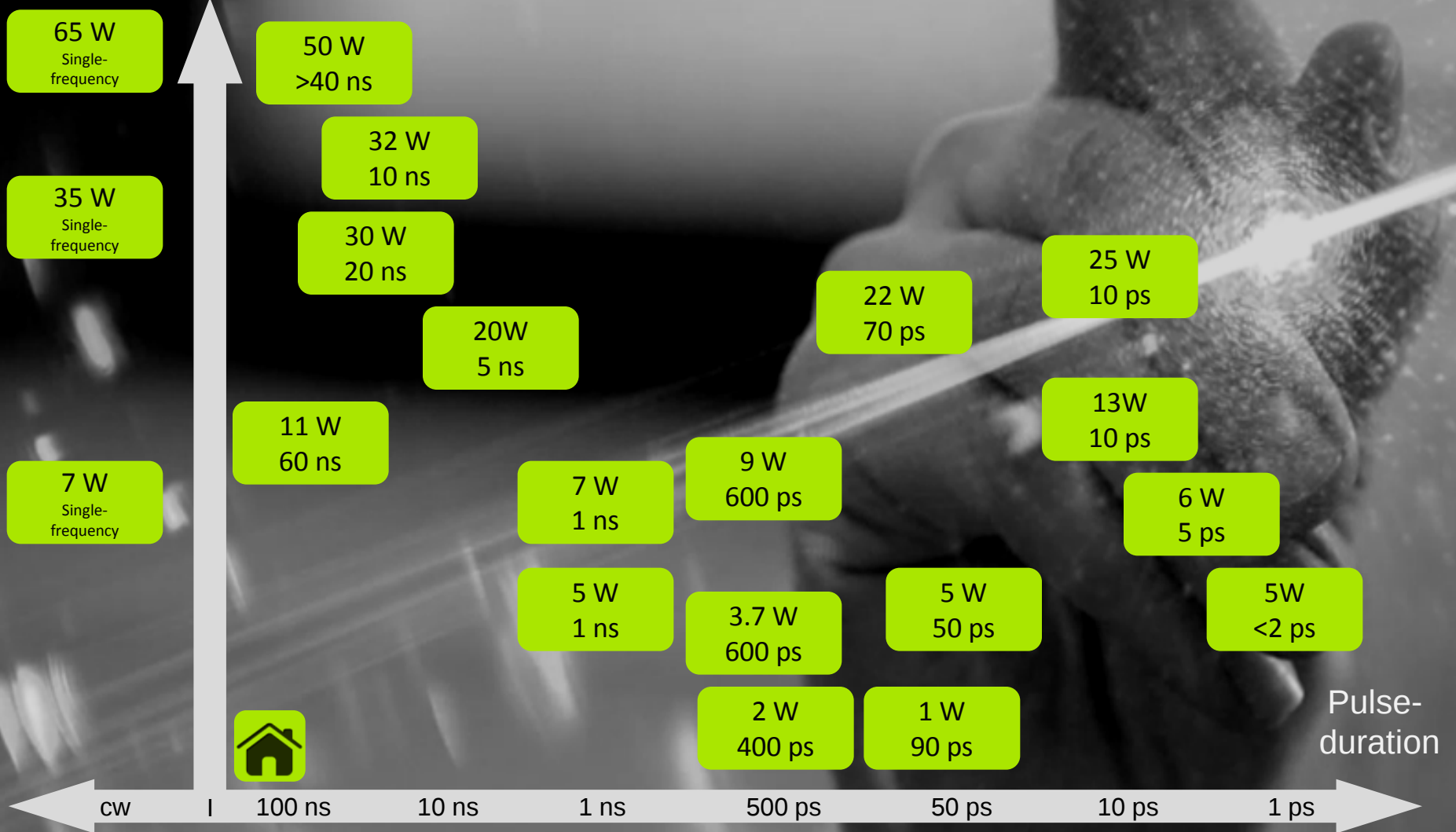
Picosecond Lasers

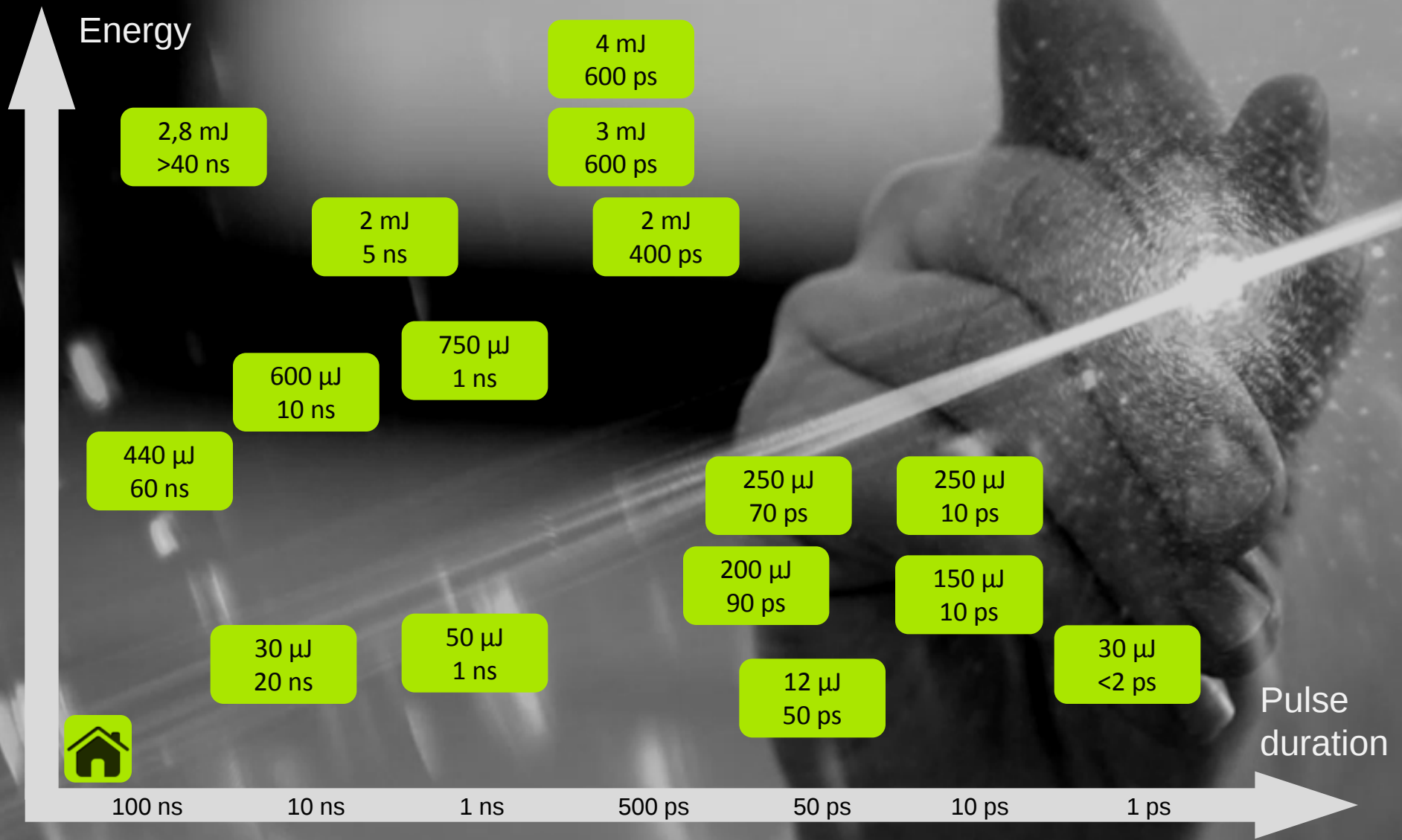


MOPA Configuration

neoMOS

Power





Datasheet:



webLINK

Fiber Laser

Pulse duration: 60-100 ns

Amplifier: neoVAN-2s

Repetition rate: 25 kHz

Output Power: 11 W

Pulse Energy: 440 μ J



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Average Power

Pulse Energy



neoLASE

Datasheet:



webLINK

Average Power

Pulse Energy



Fiber Laser

Pulse duration: 20 ns

Amplifier: neoVAN-4s

Repetition rate: 1 MHz

Output Power: 30 W

Pulse Energy: 30 μ J



Datasheet:



webLINK

DPSS Laser

Pulse duration: 10 ns

Amplifier: neoVAN-4s

Repetition rate: 50 kHz

Pulse Energy: 640 μ J

Output Power: 32 W



ESI-JDS
Uniphase



Average Power

Pulse Energy



Datasheet:



webLINK

DPSS Laser

Pulse duration: 5 ns
- Narrow line width -

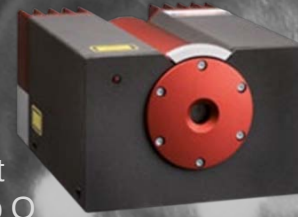
Amplifier: neoVAN-4s

Repetition rate: 10 kHz

Pulse Energy: 2 mJ

Output Power: 20 W

Coherent
Mephisto Q



Average Power

Pulse Energy



Datasheet:



webLINK

DPSS Laser

Pulse duration: 40-60 ns

Amplifier: neoVAN-4s

Repetition rate: 2.5 kHz

Pulse Energy: 2.8 mJ

Peak Power: 0.28 MW

Repetition rate: 30 kHz

Output Power: 50 W



Average Power

Pulse Energy



Datasheet:



webLINK

Microchip Laser

Pulse duration: 1 ns

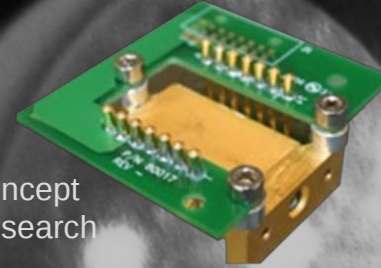
Amplifier: neoVAN-2p

Repetition rate: 100 kHz

Output Power: 5 W

Pulse Energy: 50 μ J

Concept
Research



Average Power

Pulse Energy



Datasheet:



webLINK

Microchip Laser

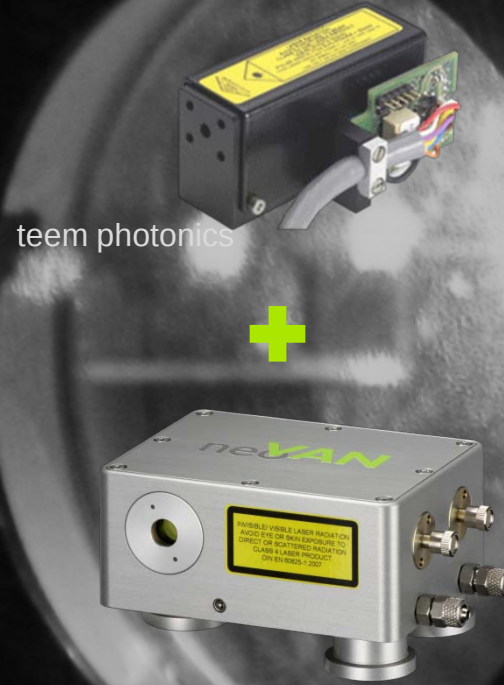
Pulse duration: 1 ns

Amplifier: neoVAN-2p

Repetition rate: 9.6 kHz

Output Power: 7 W

Pulse Energy: 750 μ J



Average Power

Pulse Energy



Datasheet:



webLINK

Microchip Laser

Pulse duration: 600 ps

Amplifier: neoVAN-2p

Repetition rate: 5 kHz

Pulse Energy: 750 μ J

Peak Power: 1.2 MW

Amplifier: neoVAN-2p-qcw

Repetition rate: 1 kHz

Pulse Energy: 3 mJ

Peak Power: 5 MW



HORUS Laser



Average Power

Pulse Energy



Datasheet:



webLINK

Average Power

Pulse Energy



DPSS Laser

Pulse duration: 600 ps

Amplifier: neoVAN- 2p-
YAG-qcw

Repetition rate: 500 Hz

Pulse Energy: 4 mJ

Peak Power: 6 MW

Amplifier: neoVAN-2p

Repetition rate: 30 kHz

Pulse Energy: 300 μ J

Peak Power: 0.5 MW

Output Power: 9 W



Coherent Helios



Datasheet:



webLINK

Average Power

Pulse Energy



Microchip Laser

Pulse duration: 400 ps

Amplifier: neoVAN-2p-faser-qcw

Repetition rate: 1 kHz

Pulse Energy: 2 mJ

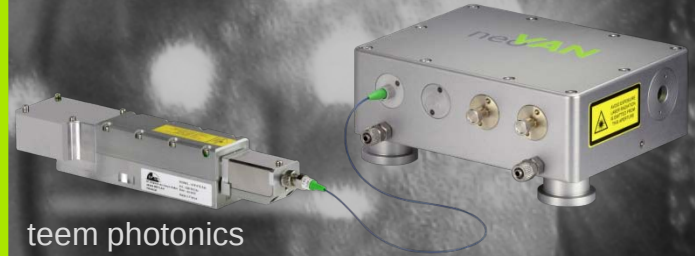
Peak Power: 5 MW

Amplifier: neoVAN-2p-faser

Repetition rate: 2 kHz

Pulse Energy: 625 μ J

Peak Power: 1.5 MW



teem photonics

Datasheet:



webLINK

Microchip Laser

Pulse duration: 90 ps

neoMOSpico

Repetition rate: 1-5 kHz

Pulse Energy: 200 μ J



Average Power

Pulse Energy



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neoLASE

Datasheet:



webLINK

Diode Laser

Pulse duration: 50 ps

Amplifier: neoVAN-2p

Repetition rate: 31 kHz

Pulse Energy: 12 μ J

Repetition rate: 10 MHz

Output Power: 5 W



Picoquant



Average Power

Pulse Energy



Datasheet:



webLINK

Diode Laser

Pulse duration: 70 ps

neoMOSpico

Repetition rate: 0-80 MHz

Pulse Energy: max. 250 μ J

Output Power: 22 W



Average Power

Pulse Energy



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Datasheet:



webLINK

DPSS Laser

Pulse duration: 10 ps

Amplifier: neoVAN-2s

Repetition rate: 10 kHz

Pulse Energy: 250 μ J

Peak Power: 25 MW

Repetition rate: 100 kHz

Pulse Energy: 130 μ J

Peak Power: 13 MW



Lumera Rapid



Average Power

Pulse Energy



Datasheet:



webLINK

DPSS Laser

Pulse duration: 10 ps

Amplifier: neoVAN-4s

Repetition rate: 160 MHz

Output Power: 70W



Lumera Rapid



Average Power

Pulse Energy



Datasheet:



webLINK

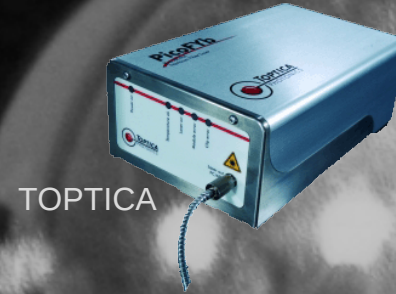
Fiber Oscillator

Pulse duration: 8 ps

Amplifier: neoVAN-2p

Repetition rate: 20 MHz

Output Power: 7.5 W



TOPTICA



Average Power

Pulse Energy



neoLASE

Datasheet:



webLINK

Fiber Oscillator

Pulse duration: 25 ps

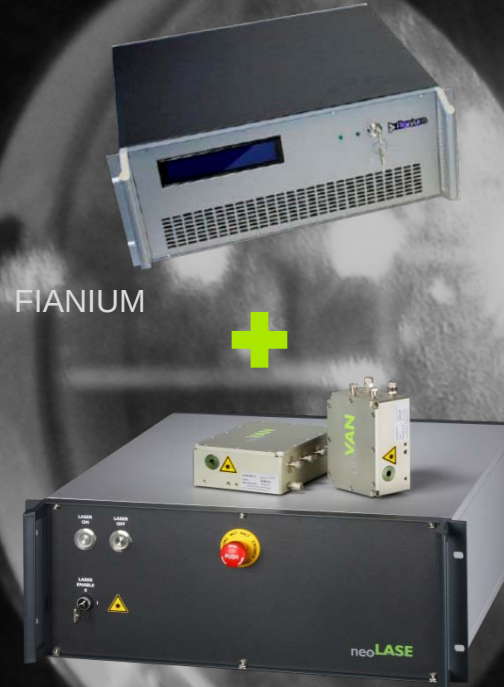
Amplifier: neoVAN-
2p+4s

Repetition rate: 0-1 MHz

Output Power: > 35 W

Output Energy: max. 150 μ J

Peak Power: 6 MW



Average Power

Pulse Energy



neo**LASE**

Datasheet:



webLINK

Fiber Oscillator

Pulse duration: 10 ps

neoMOSpico / HYLASE

Repetition rate: 0-40 MHz

Pulse Energy: max. 150 μ J

Peak Power: 15 MW

Output Power: 25 W



Average Power

Pulse Energy



neo**MOS**

neo**LASE**

Datasheet:



webLINK

Fiber Oscillator

Pulse duration: 5 ps

Amplifier: neoVAN-2p

Repetition rate: 25 MHz

Output Power: 6 W

FIANIUM



Average Power

Pulse Energy



Datasheet:



webLINK

Fiber Oscillator

Pulse duration: < 2 ps

neoMOSpico

Repetition rate: 0.1-25 MHz

Pulse Energy: $30 \mu\text{J}$

Peak Power: 15 MW

Output Power: 5 W



Average Power

Pulse Energy



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neoLASE

Datasheet:



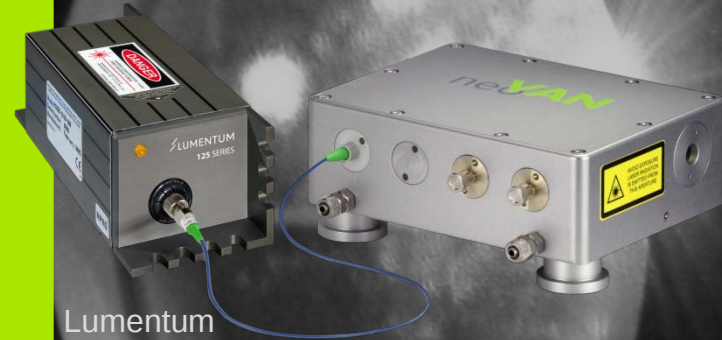
webLINK

DPSS Laser
cw / single-frequency

Amplifier: **neoVAN-
2p-faser**

Input Power: 25 mW

Output Power: 7 W



Average Power

Pulse Energy



neo**LASE**

Datasheet:



webLINK

DPSS Laser

cw / single-frequency

MOPA-System for
Gravitational wave detectors

Input Power: 2 W
Output Power: 35 W

System based on a neoLASE, LZH, AEI cooperation.



Average Power

Pulse Energy



neo**LASE**

Datasheet:



webLINK

DPSS Laser

cw / single-frequency

MOPA-System for
Gravitational wave detectors

Input Power: 15 W

Output Power: 65 W

System based on a neoLASE, LZH cooperation.

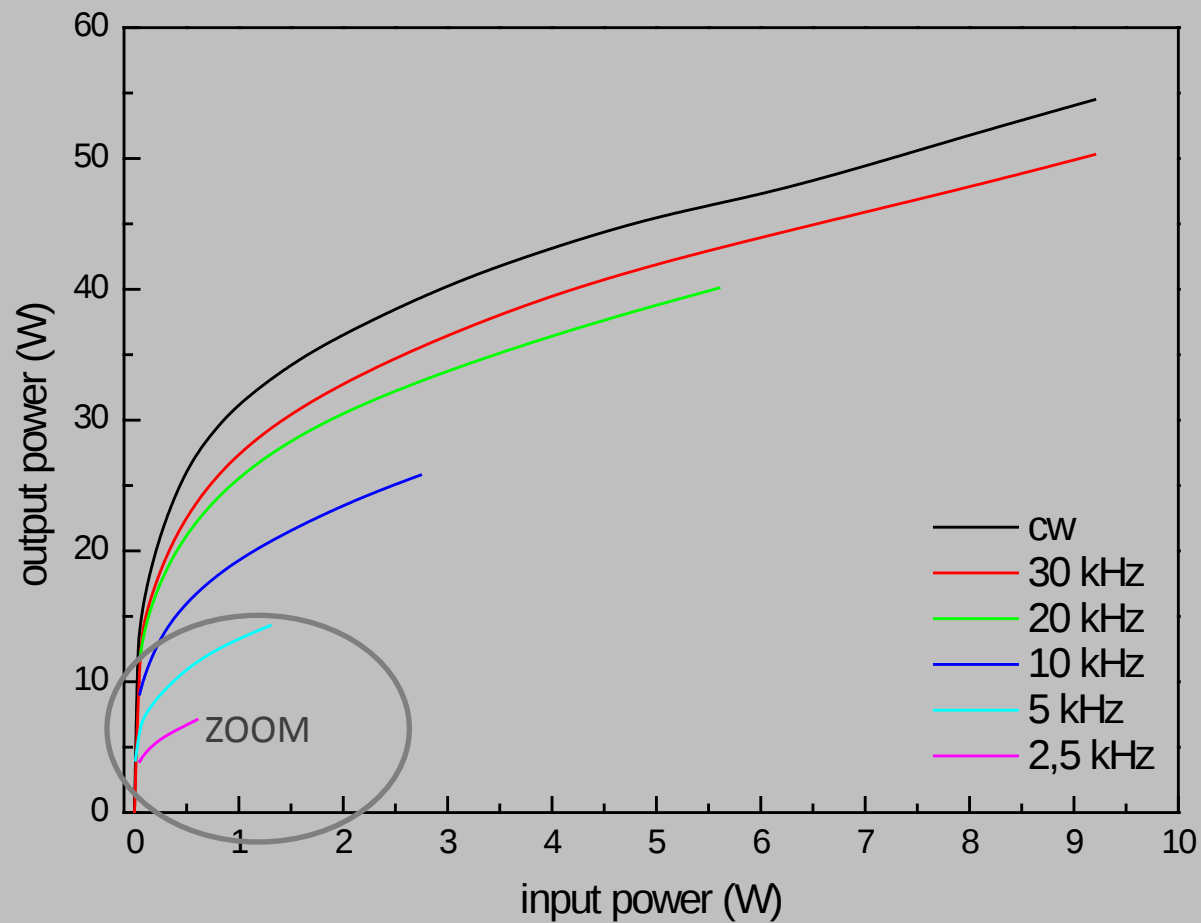


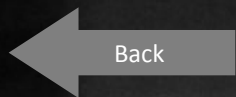
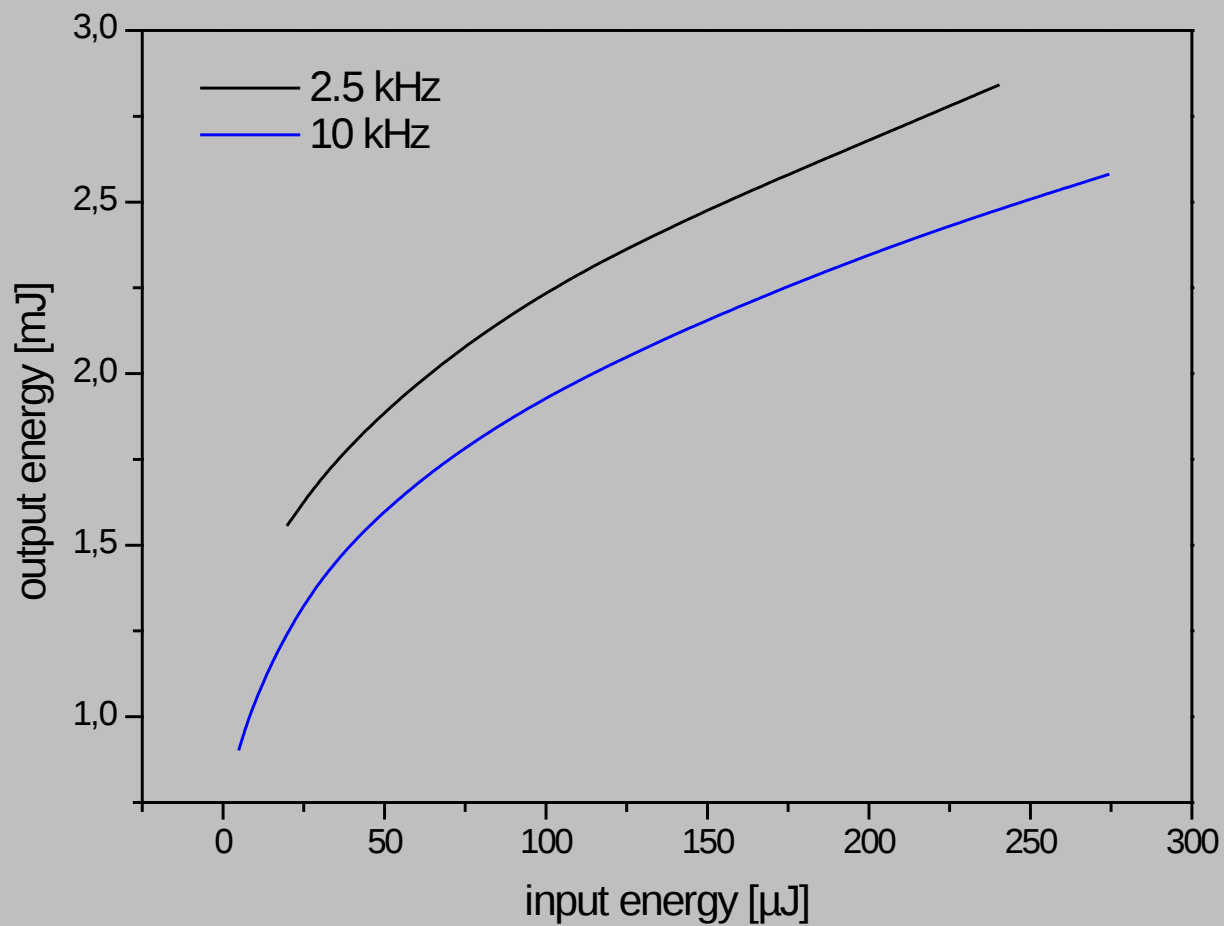
Average Power

Pulse Energy

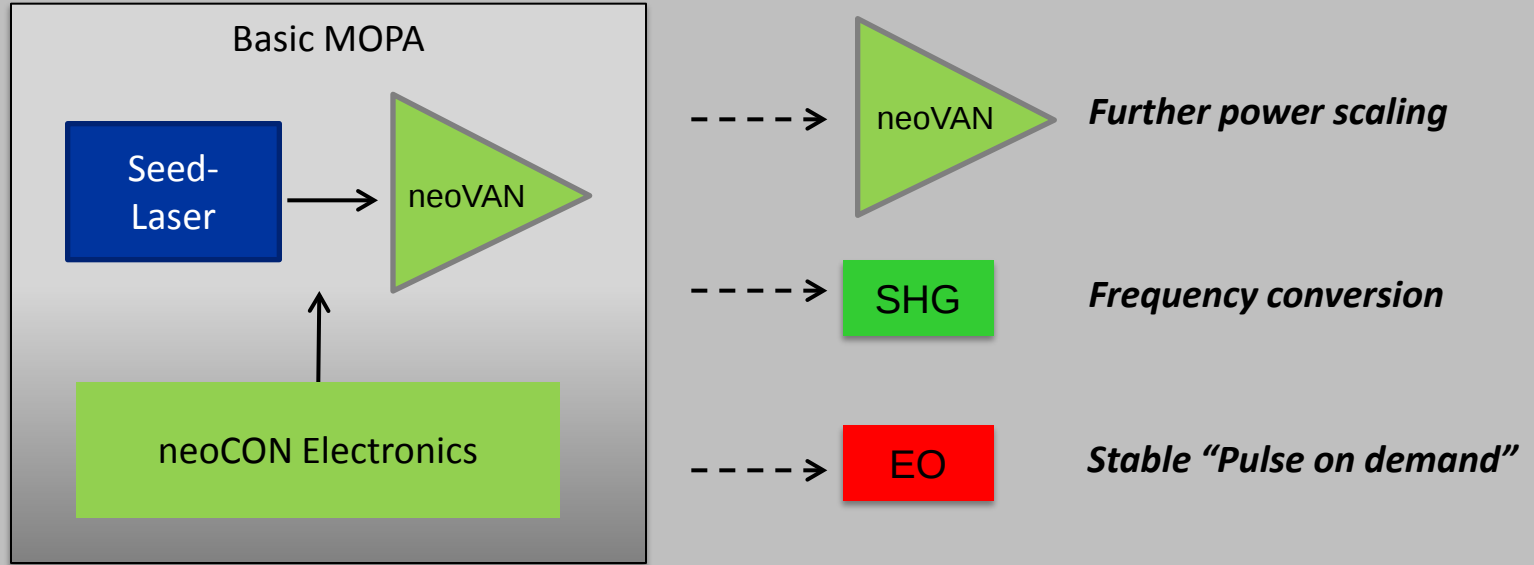


neo**LASE**





How to configure a neoLASE MOPA system



Modular structure allow for:

- Compact and variable platform
- High flexibility in pulse duration, repetition rate or output power
- Easy maintenance
- Low down time

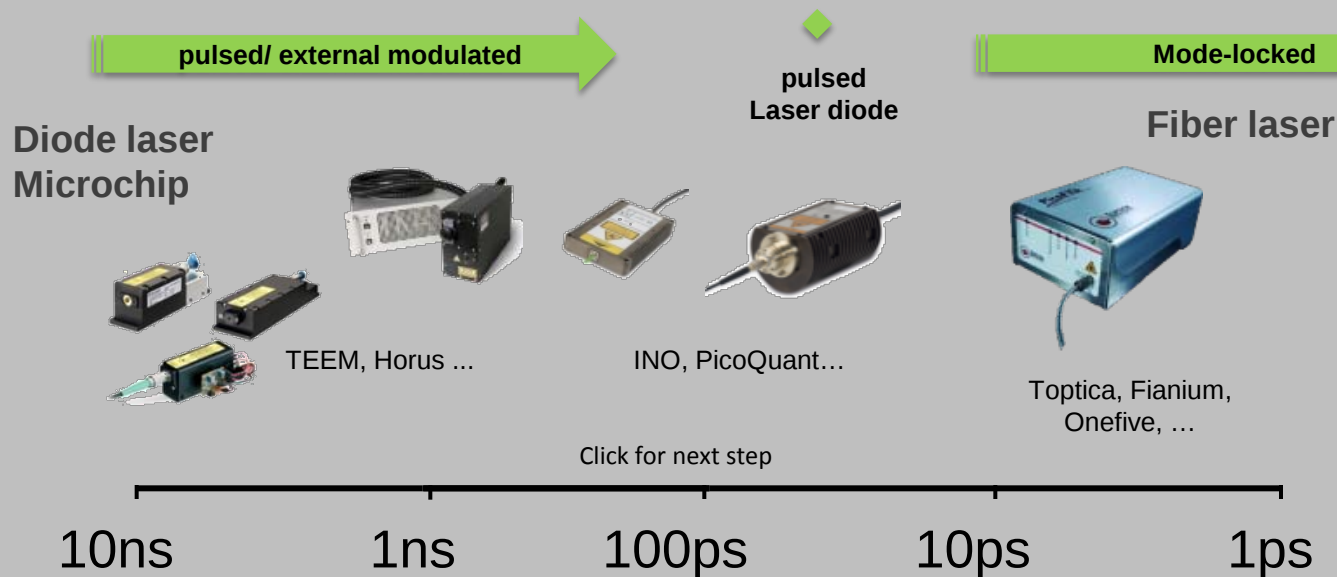
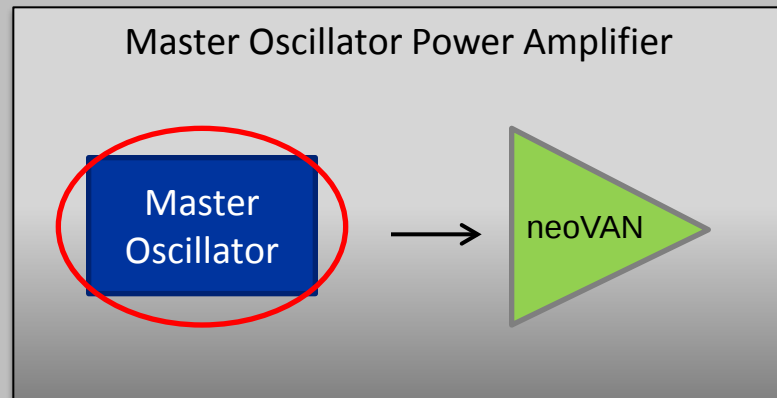
START

Click for MOPA
Configuration



Step 1: *Select a pulse duration and repetition rate range*

neoLASE will get the right seeder...



Back



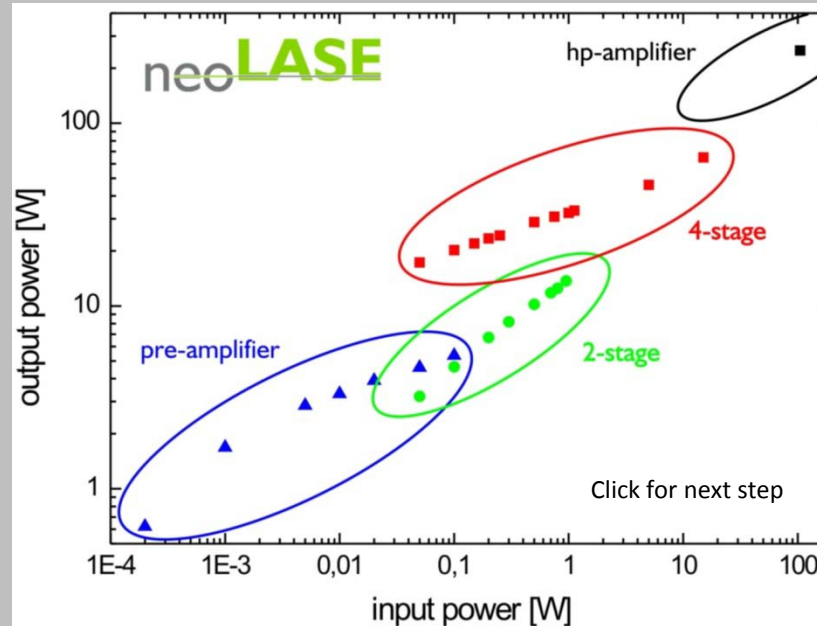
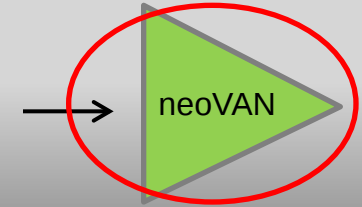
Step 2:

*What is the needed output power
and pulse energy ?*

neoLASE has the right amplifier...

Master Oscillator Power Amplifier

Master
Oscillator



Back



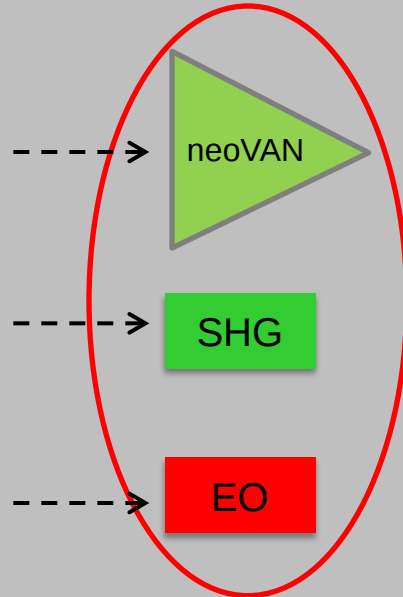
Step 3:

Other Options required ?

Wavelength ?

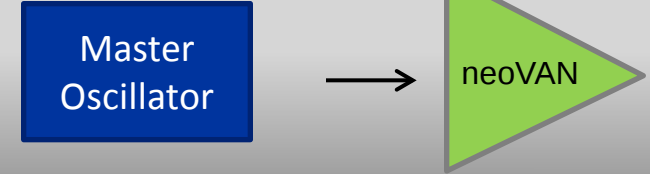
Pulse ON demand ?

neoLASE provide further options ...



Click for next step

Master Oscillator Power Amplifier



Further power scaling

Frequency conversion

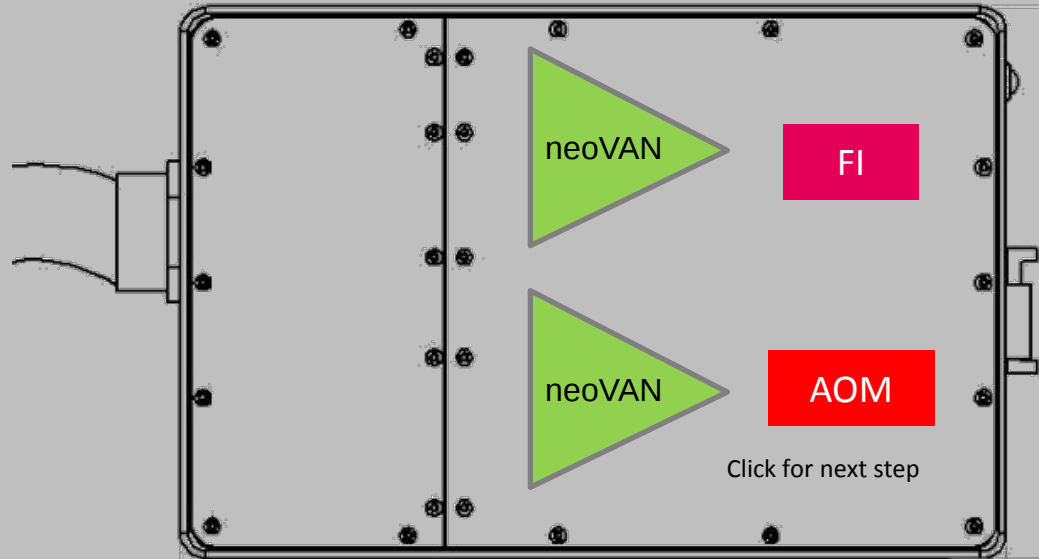
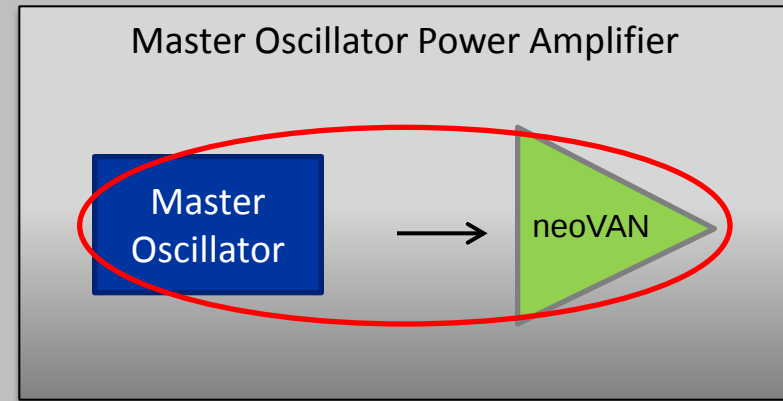
Stable "Pulse on demand"



Step 4:

*What do the system design look like ?
Industrial or Scientific ?*

*neoLASE will build the right
configuration ...*



Step 5:

Done... Please review the neoLASE MOPA system solutions:

neoMOS



[View more configurations...](#)

