

225 - 950 nm

337 nm



MALDI-TOF - TR-FRET - LIF-spectroscopy - Micro-LIBS

Nitrogen & Dye Laser Systems

for industrial demands in the ns-range

LASERS LASERS



75 kW

90 Hz

135 uJ

8 mW

2 %

3.5 kg



337.1 nm

3 ns

10 kW

300 Hz

8.4 mW

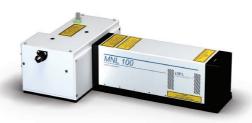
25 uJ

2.8 kg

40 μJ (up to 20 Hz)

200 million / 2 years

300 x 87 x 87 mm³



Dye Laser UDL /





MNL 100 Mini-Ni

60 million / 2 years

200 million / 4 years

321 x 95 x 95 mm³

Mini-Nitrogen-Laser	Low cost Nitrogen Laser	
337.1 nm	337.1 nm	
225 µJ	85 μJ	
3 ns	3 ns	

28 kW

80 Hz

75 uJ

6 mW

2.8 kg

MNL 300

High	Rep.	Rate	Nitrogen	Laser

400-950/225-400 nm
30 % conversion efficiency
follows the pump laser
30 % conversion efficiency
50 Hz
depending on the pump laser
depending on the pump laser
3 %
1 year
145 x 100 x 100 mm ³
200 x 200 x 100 mm ³ with SHG
1.5 kg

Frequency Doubler SHG

μ-Joule Meter PEM 250 / 500

500 Hz	Max. repetition rate
0.25 - 250 µJ / 0.25 - 500 µJ	Measuring ranges
3 ps - 50 μs	Pulse width
30 nJ	Detection threshold
10 MW / cm ²	Max. peak density
0.19 - 1.2 μm	Spectral sensitivity
Ø8 mm	Sensor area
355 + 100 nm	Calibration wavelength**
< 1 %*	Linearity
±4%**	Accuracy
14 bit	Dynamic range
1 year	Warranty
100 x 27 x 14.5 mm ³	Dimensions
0.2 kg	Weight

* for the calibration wavelength range

** customization possible

efficiency and reliability

Wavelength

Peak power

Stability

Dimensions

Weight

Pulse energy max.

Pulse width (FWHM)

Repetition rate max.

Average power max.

Pulse energy @ max. rep. rate

Warranty - standard version

Warranty - long life version

MNL 100 The ideal OEM UV-light source for Our Marathon laser - applications in the field of industrial for highest demands on detection methods and scientific

- Long operational life through a sealed discharge cartridge in metal-ceramic technology
- High precision through a directly switching solid state power switch
- · Longlife version with 200 million pulses / 4 years warrantv
- Integrated laser controller for easy incorporation in different applications
- Patented and certified CE,ETL-INTERTEK (UL,CSA,VDE,Semco) ROHS, FDA

Options: Energy monitor, beam attenuator unit, fiber coupling and fibers, dye lasers / SHG

Low-cost UV-laser, rugged and easy to use, for various applications

60 million / 2 years

300 x 87 x 87 mm³

- Long operational life through a sealed discharge cartridge in metal-ceramic technology
- High precision through a directly switching solid state power switch
- Warranty 60 million pulses / 2 years
- · Maintenance-free
- · High quality alternative to all other low-cost UV-lasers
- Only an external trigger signal required to run the laser
- Patented and certified CE, ETL* (ANSI/UL 61010-1, CAN/CSA C22.2#61010-1), FDA

Options: Fiber coupling + fibers, dye lasers

UV-laser with high repetition rate for high-throughput applications

- Long operational life through a sealed discharge cartridge in metal-ceramic technology
- High precision through a directly switching solid state power switch
- Only an external trigger signal required to run the laser
- · Maintenance-free
- Alternative to flash lamps due to the high rep. rate, the easy-to-use operation and the low purchase price

Options: Fiber coupling + fibers, dye lasers

Pulsed miniature dye lasers/SHG for the UV-VIS-NIR tuning

- · Compact, modular, efficient, easy to use
- · Manual and automated wavelength tuning
- 10 mm quartz dye cells, no dye circulators required
- Lifetime of dye solution in the dye cells typ. 6 months
- · Wavelength range extension through SHG (225 nm - 950 nm)
- MNL nitrogen lasers, but also excimer or Nd:YAG lasers (with pulse energies up to 300 µJ) are well suited as pump lasers.

Options: Energy monitor, beam attenuator unit, fiber coupling and fibers

Very compact energy measurement module for pulsed lasers

- USB-powered
- Pyroelectrical sensor
- · High sensitivity (30 nJ)
- · High dynamics 14 bit
- Several modules can be connected to one PC
- Measurement via light fibers or free beam
- · Applied in on-line monitoring in laser-induced industrial analytics and medical diagnostics, development of systems and methods, simultaneous monitoring of processes, system calibration and service

Options: Software development kit (SDK) based on our DLL

Applications

- MALDI-TOF mass spectroscopy
- MALDI Imaging
- Bioreaders
- lon trap mass spectroscopy
- LIF spectroscopy
- Time-resolved spectroscopy
- Micro-LIBS
- Laser ablation
- Microstructuring
- Dissecting cells under the microscope
- Laser acoustics
- Detector calibration
- Pump source for dye lasers
- Amplification of ultra-short laser pulses
- Technological applications such as laser induced bonding, hardening and cleaning

LTB Lasertechnik Berlin GmbH

established in 1990, is an innovative developer and manufacturer of short-pulse lasers in the whole optical spectral range, different spectrometers and laser-based measuring techniques, marketing its products worldwide.

We provide you:

- Laser sources for the industrial analytics and medical diagnostics
- Highest-resolution spectrometers for the development and production of lasers, esp. diode lasers and laser diodes, and for the laser lithography
- Laser-based measuring techniques for the spectroscopic material analysis, process analytics and medical diagnostics (LIF, LIBS and Raman)

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