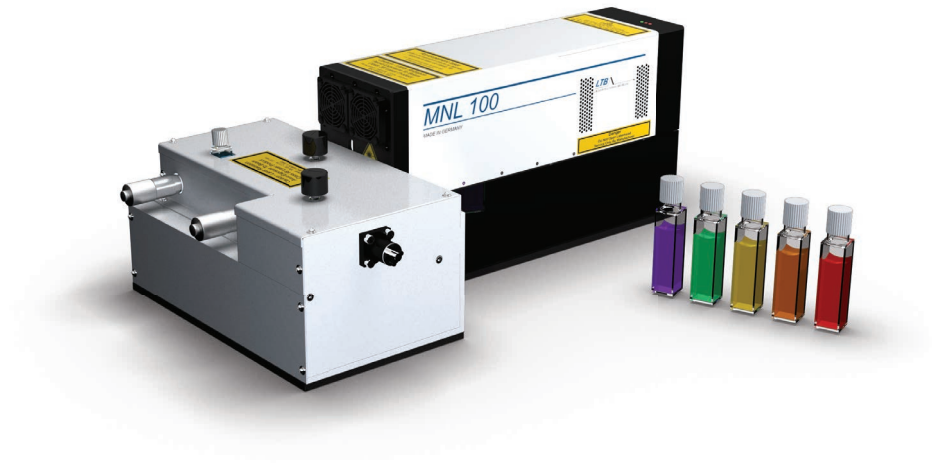


*Pulsed dye lasers and frequency doublers for manual UV-VIS-NIR tuning*



## UDL/SHG Dye Laser/Frequency Doubler

- compact – rugged – efficient
- low cost
- manual tuning
- can be pumped by different laser types

The UDL dye lasers are small and compact. They are characterized by a transversal pump geometry and depending on the model by different spectral bandwidths. Due to their modular design and their small size, they can optimally be adapted to the specific measuring process.

The series consists of 2 models:

Different wavelengths are generated with the UDL 100 by a simple exchange of the dye cells. The bandwidth is 5 - 8 nm, the typical conversion efficiency is 30 %. The model UDL 200 has a bandwidth  $\leq 2$  nm and is equipped with a reflection grating in Littrow mounting as tuning element. The wavelength is adjusted by a micrometer screw.

The SHG frequency doubling unit doubles the dye laser radiation. It covers the wavelength range from 225 - 400 nm. The phase matching of the BBO crystal is realized via a micrometer screw.

The manually tunable UDL and SHG modules are optimized for being pumped by the MNL nitrogen lasers. Here the dye lasers do not require cooling or dye circulation systems. But excimer or Nd:YAG lasers can also be used as pump lasers.

Tunable laser systems

In combination with the nitrogen lasers of the MNL model series, laser systems are provided that are tunable over a wide tuning range and easy to be operated. Together with the MNL 100 nitrogen laser a particularly small, compact and cost-efficient tunable system is at your disposal.

### Options:

- fibre couplings and fibres
- dye cells

## Applications

- LIF spectroscopy
- Time-resolved spectroscopy
- MALDI-TOF MS
- Analytics in biotechnology and medicine

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## Specifications

		UDL 100	UDL 200
UDL-Series		10 mm dye cell	10 mm dye cell
Resonator configuration		mirror / mirror	mirror / grating in Littrow mounting
Tuning range	nm	400 - 950 fix wavelengths	400 - 950 continuously tunable
Pump laser wavelength	nm	337 / 308 / 355	337 / 308 / 355
Spectral bandwidth	nm	5 - 8	≤ 2
Conversion efficiency, typ. <sup>1</sup>	%	30	20
Max. repetition rate	Hz	50	50
Beam dimensions Ø	mm	1.5	1.5
Beam divergence (v x h)	mrad	1 x 2	1 x 2
Warranty	Jahr	1	1
Dimensions	mm	115 x 250 x 170	115 x 250 x 170
Weight	kg	1.5	1.5

		UDL 100	UDL 200
SHG 1	Tuning range	nm 225 - 400	225 - 400
	Conversion efficiency, typ. <sup>1</sup>	% 6*	6*

\* related to the dye laser

## Sample specifications manually tunable laser systems

		MNL 100-HP	UDL 200	UDL 200+SHG 1
MNL 100-HP as pump laser	Wavelength	nm 337.1	400 - 950	225 - 950
	Spectral bandwidth	nm 0.1	2	2
	Pulse energy, typ.	µJ up to 225	40	2.4
	Peak power	kW up to 75	14	0.8
	Max. repetition rate	Hz 30	30	30
	Pulse halfwidth – FWHM, typ.	ns 3	3	3

Subject to technical changes