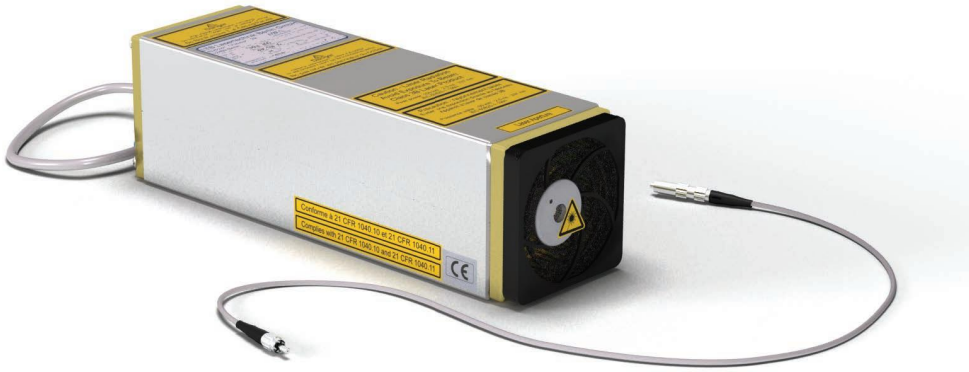
Low-cost
Pulsed UV-laser



MNL 300

Pulsed UV-laser source up to 80 Hz

- Up to 80 Hz
- Long operating life
- Low-cost
- Compact
- Compatible with VSL337i

The MNL 300 is the ideal light source for applications like fluorescence, phosphorescence and mass spectrometry in research, medical diagnostics and industry.

Compact, reliable and cost-efficient, it can provide pulse energies up to 85 µJ and repetition rates up to 80 Hz with a maximum average power of 5 mW.

The MNL 300 is characterized by its long lifetime, low energy decay and high precision. This is achieved by the patented innovations:

- Sealed cartridge in metal-ceramics technology
- Directly switching solid state power switch

The MNL 300 presents the advantages of modern laser technology.
Only an external trigger signal is required for its operation. That is the reason why its use is so simple and insusceptible to interferences.

The standard version with free beam can be equipped with an optical fiber for the light output allowing the best integration into the customers' applications.

Moreover it is possible to couple the MNL 300 with a tuning module in order to provide several wavelengths of the whole visible spectrum.

The air-cooled MNL 300 is supplied with a low voltage of 24 V DC / 60W. A wide range power supply can be obtained from LTB, if required (100 – 240 V, 50 – 60 Hz).

Small, compact, with a total volume of 2.2 litres, the MNL 300 will provide you the best performances of a UV-laser in this price segment.

Options:

- Fiber coupling and fibers
- Tuning module to provide 4 wavelengths simultaneously or sequentially

Applications:

- For bioreader applications
- LIF spectroscopy
- Alternative to flash lamps
- MALDI-TOF MS
- Micro LIBS
- Replacement for VSL337i

Specifications

			MNL 302	MNL 305	MNL 308
General	Wavelength	nm		337.1	
	Spectral bandwidth	nm		0.1	
	Pulse halfwidth FWHM, typ.	ns		3	
	Guaranteed pulse energy over 60 million pulses[1]	µJ	85 @ 20 Hz	80 @ 50 Hz	75 @ 80 Hz
	Pulse power, typ.	kW	28 @ 20 Hz	26 @ 50 Hz	25 @ 80 Hz
	Repetition rate[4]	Hz	up to 20	up to 50	up to 80
	Energy stability SD (for all rep. rates)	%		≤ 2	
	Beam dimensions, vertical x horizontal, typ.	mm		3 x 4	
	Beam divergence, vertical x horizontal[2]	mrad		≤ 3.5 x ≤ 3	
	Focus stability	µm		< 15	
	Beam exit angle, vertical / horizontal, typ.	grad		+0.5 (±0.2)/0 ±0.1	
	Trigger In			Optical or electrical (TTL)	
	Jitter: ext. trigger - laser pulse Pulse delay: ext. trigger - laser pulse	ns ns		± 5 1,600 ± 10 %	
	Sync Out (optional)				
	Jitter: electr. trigger exit - laser pulse	ns		< 0.2	
	Warm-up time	s		< 20	
	Control			external Trigger	
	Warranty			60 (120) million pulses / 2 (3) years	
	Certifications			CE, ETL* (ANSI/UL 61010-1, CAN/CSA C22.2#61010-1), FDA	
	Laser class			3B / IIIb	

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Electrical interface	Power supply[3]	V DC		24	
	Periodic peak current	A		3.0	
	Periodic peak power = max. power	W		72	
	Average current	A	0.8 @ 20 Hz	1.15 @ 50 Hz	1.45 @ 80 Hz
	Average power	W	20 @ 20 Hz	28 @ 50 Hz	35 @ 80 Hz

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Environment and conditions of use	Operating temperature	°C		+15 ... +38	
	Storage temperature	°C		- 10 ... +60	
	Max. relative humidity (non-condensing)	%		85	
	Air pressure	mbar		750 ... 1,300	
	Dimensions of the laser (L x W x H)	mm		300 x 87 x 87	
	Weight of the laser	kg		2.8	

* Report No. 2212292WIE-004
[1] without fiber (higher energies on request)
[2] at max. repetition rate; measuring at 5 m distance
[3] via external wide-range power supply (100... 240 V AC) (part of delivery)
[4] other versions with different repetition rates possible

Subject to technical changes.