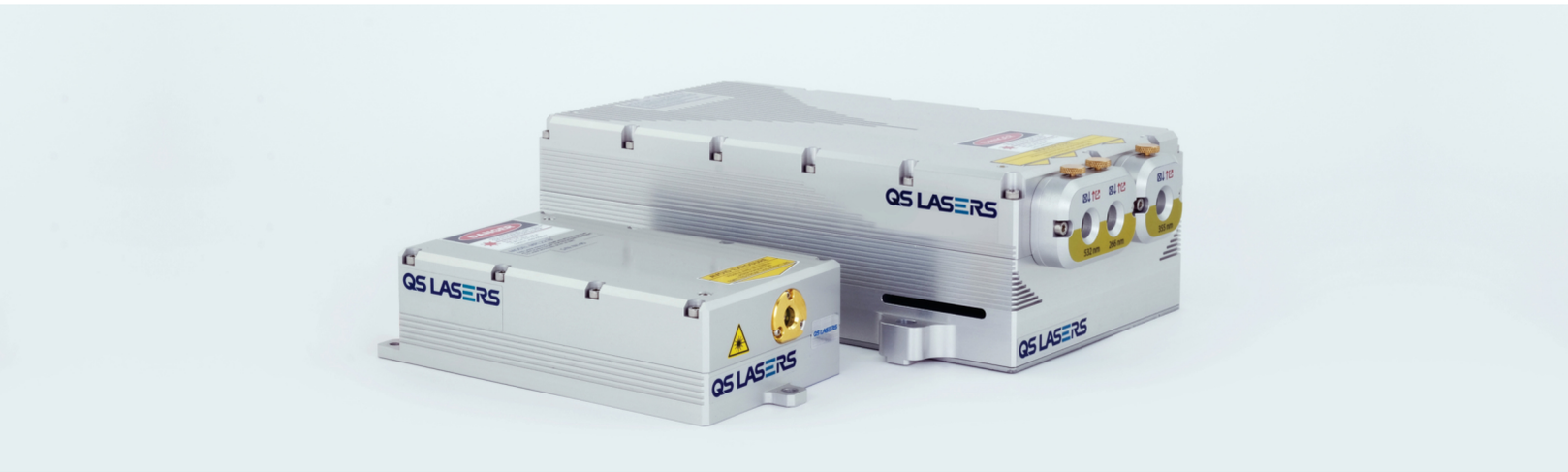
Diode-pumped Picosecond Passively Q-Switched Lasers



QS Lasers offers a series of compact DPSS passively Q-switched picosecond lasers, meticulously engineered for seamless OEM integration and high-volume production. Despite their small footprint, these lasers deliver outstanding pulse-to-pulse stability and superior performance for demanding applications across a variety of industries.

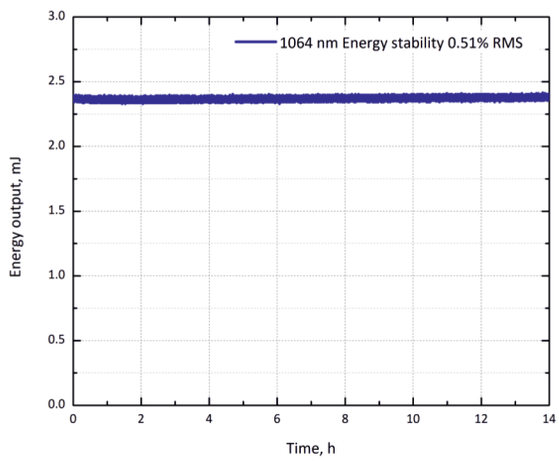
Features

- Up to 3 mJ pulse energy at 1064 nm
- 250-800 ps pulse duration
- 1-100 Hz repetition rate
- Compact, hermetically sealed design
- Low jitter <2 µs
- Guaranteed >3 Gshot lifetime
- Simultaneous or discrete 532 nm, 355 nm output options

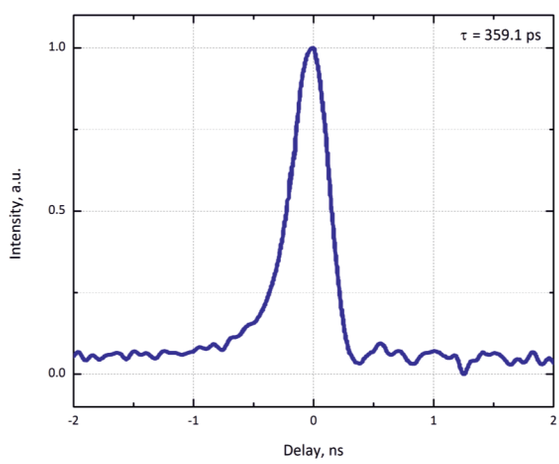
Applications

- Seeder for amplifier
- Laser-induced breakdown spectroscopy (LIBS) and imaging
- Laser flash photolysis
- Time resolved fluorescence measurements
- DNA analysis
- Pollution monitoring
- Supercontinuum generation
- Time gated Raman spectroscopy
- Ultrasonic wave generation

MPL231 Typical energy output



MPL231 Typical pulse duration



TOPAG Lasertechnik

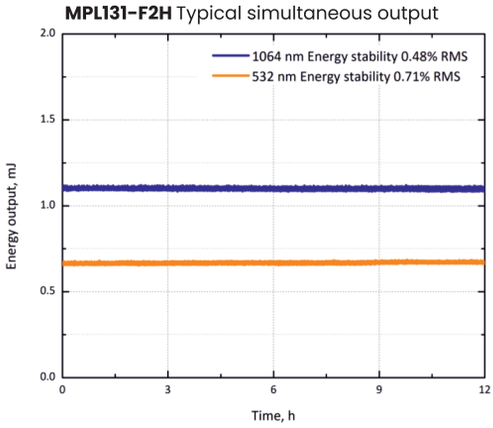
Represented by TOPAG Lasertechnik GmbH | +49 6151 42944 0 | info@topag.de | www.topag.de

Specifications [1]

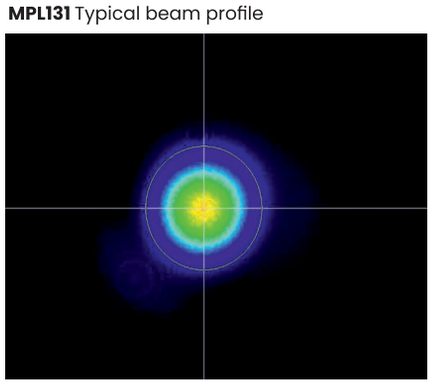
		MPL111	MPL121	MPL131	MPL211	MPL221	MPL231	MPL310	MPL320	MPL330
Output characteristics										
Pulse energy (mJ)	1064 nm	1			2			3		
	532 nm	0.5			1			1.5		
	355 nm	0.25			0.5			0.6		
Pulse duration [2] (ps)		250	350	500	250	350	500	250	350	500
Pulse repetition [3] (Hz)		1-100						1-10		
Pulse-to-pulse energy stability [4] (% RMS)	1064 nm	<1								
	532 nm	<2								
	355 nm	<3								
Power drift [5] (% RMS)		±3								
Optical pulse jitter [6] (µs RMS)		~2								
Beam divergence [7] (mrad)		<6								
Beam diameter [8] (mm)	1064 nm	1.5								
	532 nm	1								
	355 nm	1								
Pointing stability, full angle (µrad)		<50								
Polarization		linear, horizontal								
Triggering modes		internal / external								
Beam spatial profile		close-to-Gaussian in near and far fields								
Laser head		138 x 200 x 89								
with 2nd harmonic output		138 x 200 x 89								
with 3rd, 2nd/3rd harmonic output		138 x 295 x 89								
Laser controller		260 x 333 x 150								
Laser head		99 x 175 x 45.5								
Laser controller		136 x 261 x 127								
Electrical requirements		100-240 V AC, single phase 50-60 Hz								
Power consumption		<50 W								
Cooling system		TEC								
Ambient temperature		20-30 °C								
Relative humidity		10-80% (non-condensing)								

* Customized models available on request

MPL131-F2H Typical simultaneous output

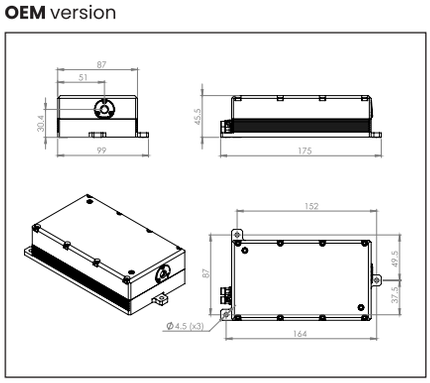


MPL131 Typical beam profile

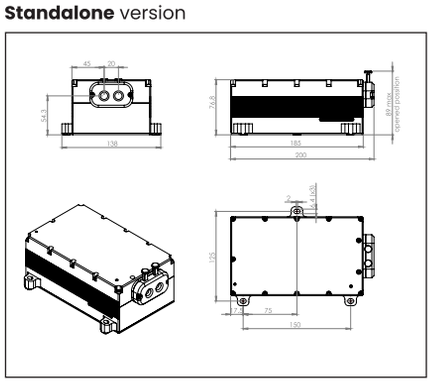


[1] Due to continuous improvements all specifications are subject to change. Unless stated otherwise all specifications are measured at 1064 nm and 100 Hz.
[2] FWHM level at 1064 nm.
[3] Factory-set pulse repetition rate is set at 100 Hz.
[4] Averaged from 30 second time interval in 5 series.
[5] Over 8 hours when temperature variation is ±2 °C.
[6] In respect to q-switch sync. signal in internal trigger mode, rising edge of TTL-sync. out signal. Internal trigger mode delivers TTL-sync. out signal.
[7] Full angle measured at $1/e^2$ level; can be adjusted to customer requirements, please inquiry for more details.
[8] Beam diameter is measured 20 cm from laser output at $1/e^2$ level.

OEM version



Standalone version



Standalone version