

High-Energy DPSS Picosecond Lasers

Compiler and Compiler Upgrade

The **Compact Picosecond Laser Emitter** series of DPSS lasers are powerful sources of short light pulses with excellent stability from pulse to pulse. The lasers operate at 1064 nm, 532 nm, 355 nm, 266 nm and 213 nm wavelengths providing the highest UV energy density available from a commercial laser.

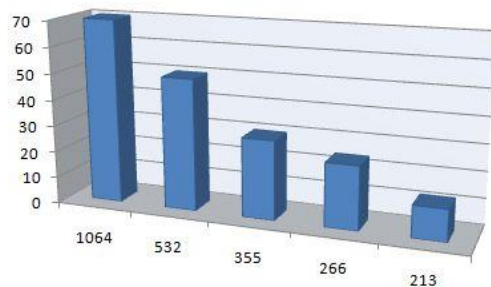


213 / 266 / 355 / 532 / 1064 nm laser with optional internal attenuator

Customized Turnkey Solutions

Compiler lasers can be customized in accordance with the particular request. Additional features include switchable or non-switchable separate outputs for different wavelengths, computerized or manual power attenuation, signal synchronization and gating.

Compiler peak pulse power, MW



Laser with concurrent 355 and 532 nm outputs with shutters and sync connector

Features

- ◆ 6-8 picosecond pulse width
- ◆ >500 $\mu\text{J}/\text{pulse}$ (Compiler @1064nm)
- ◆ >2,300 $\mu\text{J}/\text{pulse}$ (Compiler Upgrade @1064nm)
- ◆ 400 Hz standard, up to 1,000 Hz upon request
- ◆ TEM₀₀ mode
- ◆ Air cooled
- ◆ External triggering or computer controlled, including burst mode



Laser with switchable 266/355 nm emission

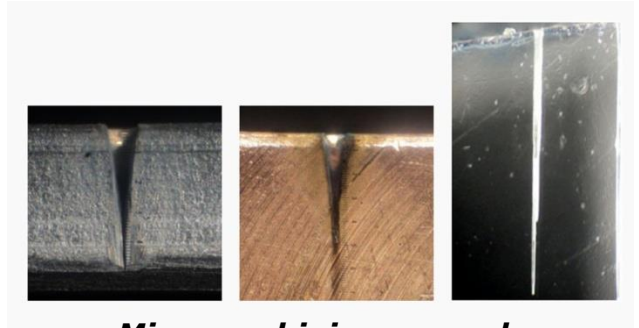
Superior peak-power to price ratio, industrywide



Passat

Applications

- ◆ Micromachining (diamonds, glass, plastic, metals, ceramics)
- ◆ Photo ionization
- ◆ Laser-induced breakdown spectroscopy (LIBS)
- ◆ Laser ablation, fragmentation and destruction
- ◆ Photolithography
- ◆ Single and double photon Laser-induced fluorescence (LIF)
- ◆ Time resolved spectroscopy
- ◆ Raman spectroscopy
- ◆ Remote sensing
- ◆ Medical and biomedical research



Micromachining examples

Aluminum	Copper	Polycarbonate
Cut depth: 1200 μm	Cut depth: 900 μm	Cut depth: 4500 μm
Cut wall slope: 6.5 deg.	Cut wall slope: 16.5 deg.	Cut wall slope: 2.3 deg.

Compiler specifications*

Wavelength	1064 nm	532 nm	355 nm	266 nm	213 nm
Energy output (at 400 Hz)	550 μJ	350 μJ	180 μJ	120 μJ	50 μJ
Pulse width	8 ps	7 ps	6 ps	5 ps	4 ps
Repetition rate	Internal/external triggering, up to 400 Hz				
Q-switch	Passive				
Beam quality	Diffraction limited				
Beam profile	TEM ₀₀ Gaussian				
Pulse stability	<6% (<3% @1064 nm)				
Output beam pointing stability (std dev, 1 hour)	~0.5 Diffraction limit				
External control	Connector for TTL trigger input port (4 +/-1V, 1 k Ω)				
Electrical power	~ 100-240VAC, 47-63 Hz, single phase				
Power consumption	< 80 W				
Warm-up time	Less than 2 minutes				
Operating temperature and humidity	18-28 °C; 10-85 %				

* Request Compiler Upgrade for a more powerful output

Delivery set

- ◆ Laser head
- ◆ Pumping unit
- ◆ Optical fiber
- ◆ Signal cable
- ◆ Power cord
- ◆ CD with manual and control software



Laser with rackmount pumping unit, fiber and signal cables