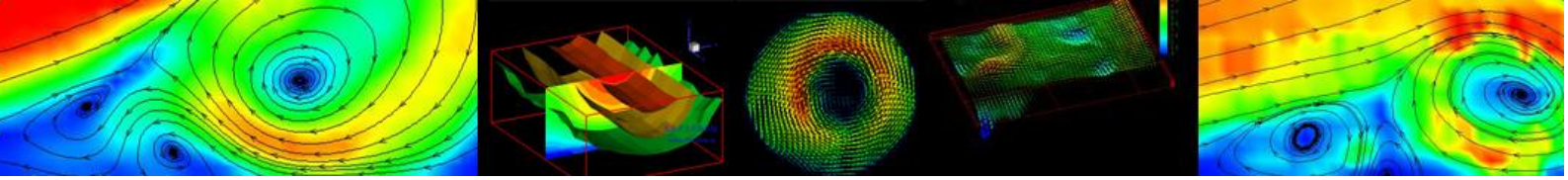
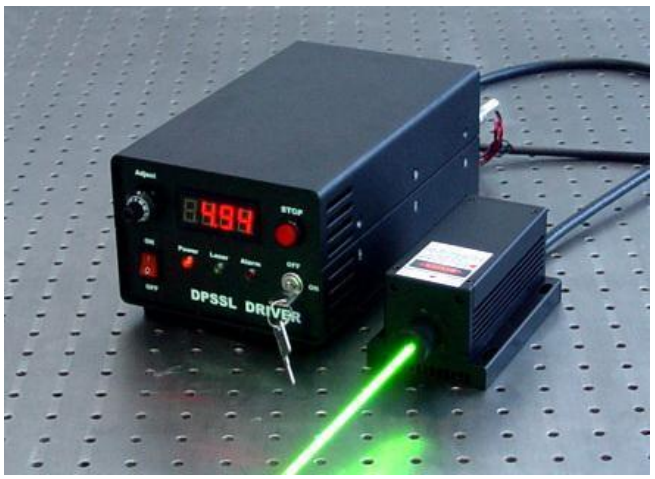
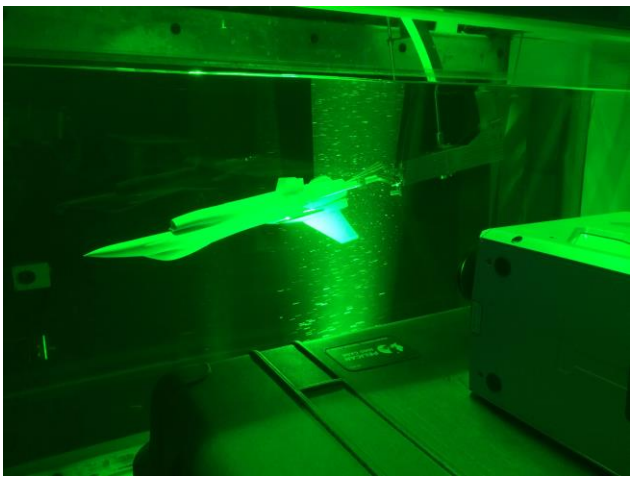


Microvec DPPS Lasers

Diode-pumped solid-state lasers (DPSSLs) offered by Microvec are Q-switched Pulsed Nd:YAG solid-state lasers made by pumping a neodymium-doped YAG crystal with a laser diode. These models are especially appropriate for applications with a demand for higher repetition rates at lower energies. All models ranging from 1W to 10W feature compact laser heads and small-sized power supplies.

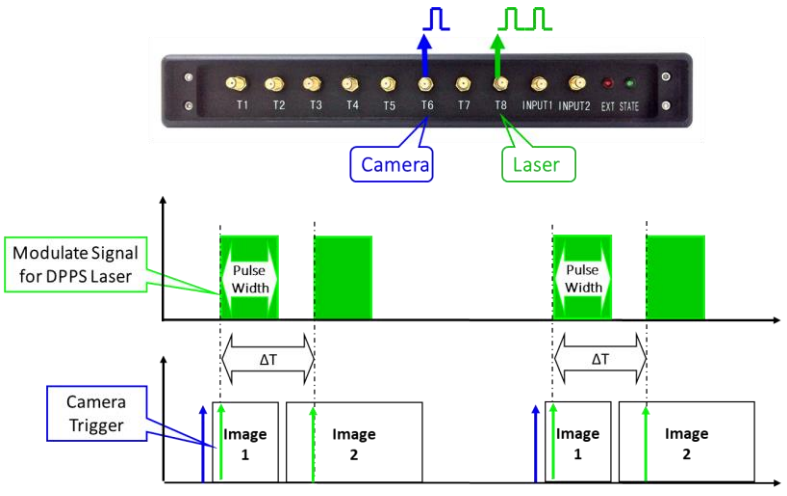




DPSS Lasers can be used in continuous wave mode or can be triggered by TTL or analogue external trigger signal. When MicroPulse 725 synchronizer is used, the lasers can be controlled with highest precision by MicroCap software. These models are generally suitable for flows with speed of up to 2m/s (with synchronizer). They can be modulated by MicroPulse synchronizer and MicroCap software to generate a double pulse. See Figure below. The time interval in double pulse can be set to between 1 ms and 5 ms for normal flow. The lasers can be used with traditional PIV systems with CCD cameras as well as Time Resolved PIV systems. With TR PIV when using high speed CMOS cameras recording the lasers can be modulated up to 30,000 Hz. Besides being a part of PIV, these DPSS lasers can be used in field measurements of 5 to 20 cm.

Main Features:

- Compact laser head and power supply with small footprint
- Quick and easy to install
- Excellent beam quality and reliable optical stability
- Long diode lifetime
- Laser optics sheet included
- Controllable power level
- Double pulse available through MicroPulse 725 Synchronizer and MicroCap software
- Maintenance-free pumping chamber



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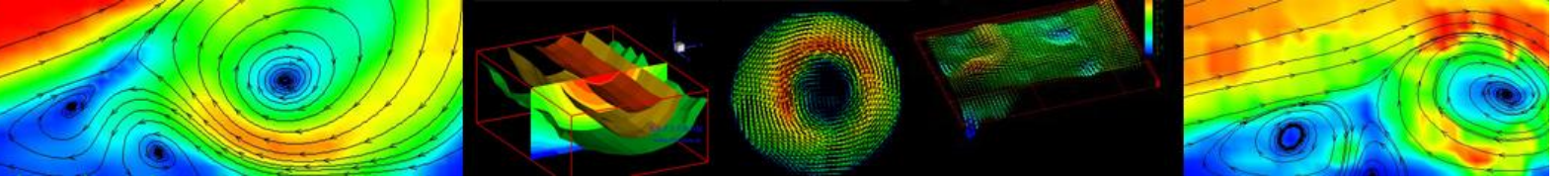

Specifications:

Descriptions	Specifications	
Wavelength	532 nm	
Output Power	1W, 2W, 3W	5W, 8W, 10W
Beam Diameter	2mm	3mm
Energy Stability	⩽3% RMS over 4 hours	
Energy Adjustment	0 - P_{max}	
Beam Pattern	Near TEM_{00}	
Beam Propagation Factor (M^2)	<1.5	
Temporal Jitter	<1 ns	
Divergence	<1.5 mrad	
Pointing Stability after Warm-up	< ± 50 µrad	
Spectral line width	<0.1 nm	
Amplitude Noise	3% rms	

Operating Requirements:

Operating Temperature	10 - 35°C
Expected Lifetime	10,000 hours
Relative Humidity	20 - 50% non-condensing
Voltage	85-265 VAC, 50/60 Hz
Laser Class	IV

Sample Models:

Model		SM-SEMI-1	SM-SEMI-5	SM-SEMI-10
TTL Modulation (kHz)		100		
Analog Modulation (kHz)		30		
Power (W)		1	5	10
Dimensions (mm) (L x W x H)	Optical laser head	168 x 98 x 102	168 x 98 x 102	180 x 133 x 95
	Power supply	244 x 144 x 139	244 x 144 x 139	330 x 140 x 125
Weight (kg)		2.8	5.5	10.2

Note：Specifications subject to change without notice

MicroVec

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