



High repetition rate DPSS lasers

Tolar-527 series is diode pumped solid-state pulsed laser, providing high-energy and high repetition rate at 527nm. By using high quality Nd:YLF crystal and Q switch technology, Tolar-527 series offers energy up to 50mJ at 1kHz, with pulse duration of 200ns. It can be widely used in scientific research, industrial processing and other fields, especially for applications required both high single pulse energy and high average power.

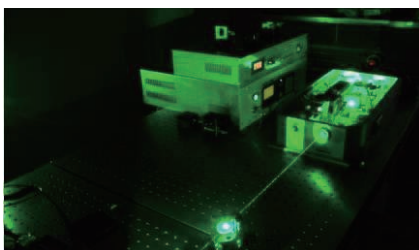
Tolar-527 uses CW LD pumping and inner-cavity harmonic wave generation technology. With consistent shape design and electrical interfaces, it is also suitable for system integration.

Features

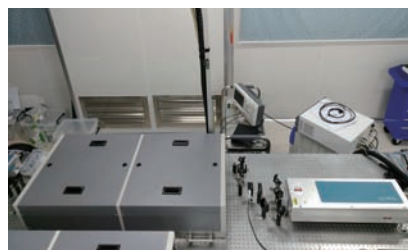
- Maximum pulse energy 50mJ@1kHz
- Frequency adjustable from 0.2-10kHz
- Stable performance after long time operation
- Compact sealed mechanical structure
- Programmable communication control interface
- Low timing jitter

Applications

- Pumping Ti:Sapphire laser
- Semiconductor wafer surface processing
- Material processing
- Flow field lighting imaging



Pumping Ti:S Laser



Pumping Femtosecond Laser



TR PIV



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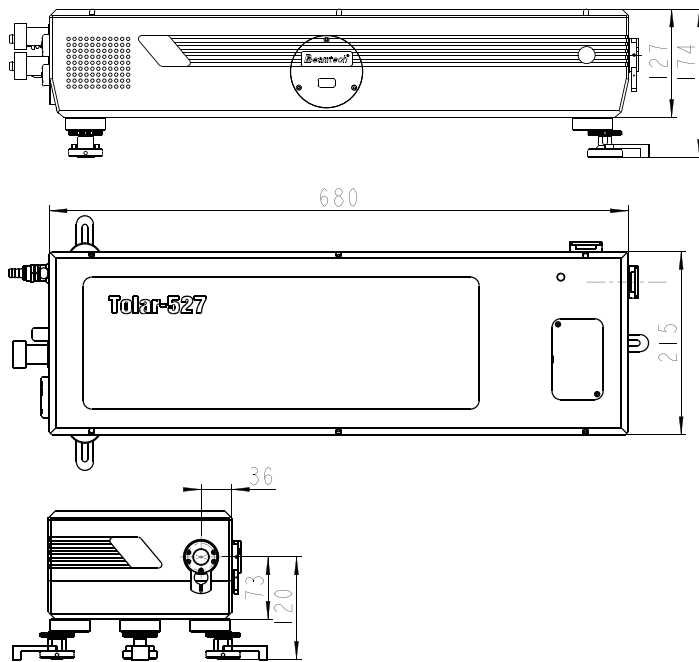
Specifications

Models ¹	Tolar-527-20	Tolar-527-30	Tolar-527-40	Tolar-527-50
Wavelength	527nm			
Pulse Energy	20mJ at 1kHz	30mJ at 1kHz	40mJ at 1kHz	50mJ at 1kHz
Average Power	20W at 1kHz	30W at 1kHz	40W at 1kHz	50W at 1kHz
Repetition Rate	Fixed one rate of 0.2k-10kHz			
Mode	Multi-Mode			
Pulse Duration (FWHM) ²	~200ns	~200ns	<180ns	<160ns
Beam Diameter at Output ³	4mm	5mm	5mm	5mm
Polarization	linear			
Energy Stability (RMS) ⁴	1%			
Power Drift ⁵	1%			
Divergence ⁶	5mrad	8mrad	8mrad	8mrad
Beam pointing stability	20urad			
Time Jitter (RMS) ⁷	3ns			
Cooling	Chiller			
Electrical Service	220V-50/60Hz-10A			
Umbilical Length	3m			

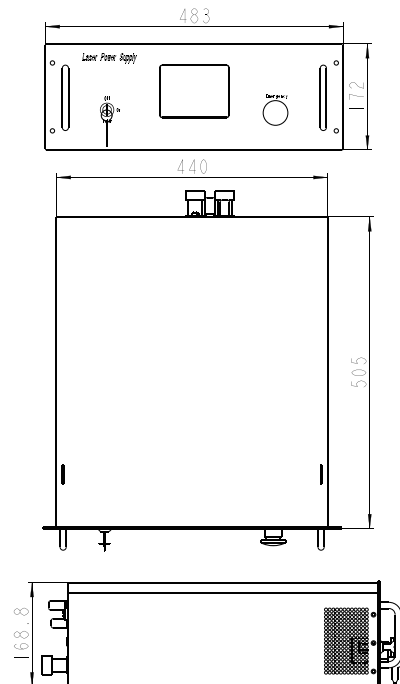
- i** 1. All specifications are measured at 1kHz unless otherwise noted.
 2. Full width half max (FWHM);
 3. Measured at the laser output;

4. Dev.to average (shot to shot for 99% of pulses);
 5. Average for 16 hours with room temperature variation less than 1%.
 6. Full angle at 1/e² of the peak.
 7. With respect to external trigger.

Dimensions



Tolar-527-20/30



Power Supply