



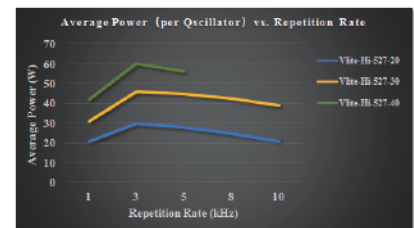
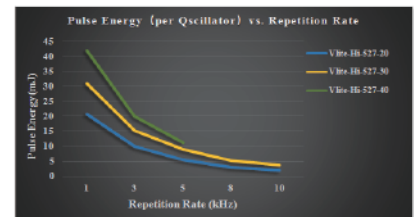
High repetition rate dual-cavity DPSSL

For the measurement of unsteady flow field (TR-PIV), Beamtech offers Vlite-Hi-527 dual-cavity lasers with high repetition rate. In order to achieve higher repetition rate and better beam quality, Vlite-Hi-527 applies high-quality Nd:YLF laser crystal and acoustic optical Q switch technology, with energy up to 50mJ@1kHz and pulse width 200ns.

Vlite-Hi-527 applies ingenious light path design and engineering technology to ensure the high energy stability up to 1%. Because the laser intensity is IV class, the Vlite-Hi-527 series particularly emphasizes on safety and electromagnetic compatibility design, equipped with protection light lock, power supply interlock, flow switch, emergency stop switch, open box protection etc.

Features

- Frequency continuously adjustable: 0.2-10kHz
- Pulse width: 200ns@1kHz
- Low timing jitter
- Integrated design of laser, light guide arm and sheet optics
- High beam combination stability of two cavities
- Ultra-uniform beam profile
- Compatible with a variety of PIV systems



Applications

- Micro PIV
- 2D/3D PIV
- Tomographic PIV
- Time Resolved PIV



Power Supply & Cooling System



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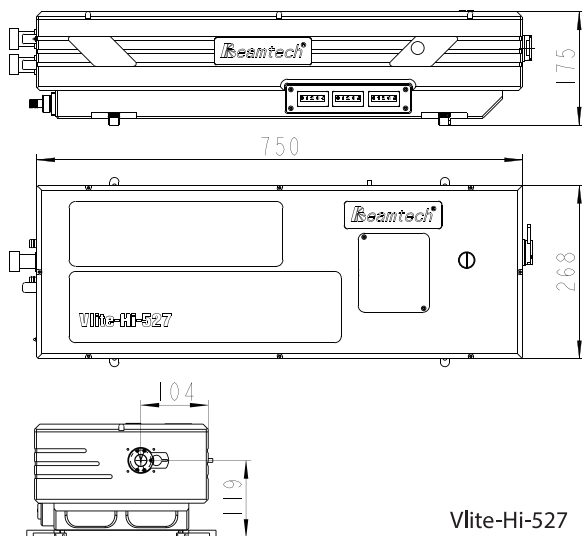
Specifications

Models		Vlite-Hi-527-20	Vlite-Hi-527-30	Vlite-Hi-527-40	Vlite-Hi-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
Frequency		0.2k-10kHz			
Mode		Multi-Mode			
Pulse Duration ¹		~200ns	≤200ns	≤180ns	≤150ns
Beam Diameter ²		~5mm			
Energy Stability ³ (RMS)		≤1%			
Power Drift (RMS)		≤1%			
Divergence ⁴		≤5mrad	≤8mrad	≤8mrad	≤8mrad
Beam pointing stability		≤20μrad			
Time Jitter ⁵ (RMS)		≤3ns			
Cooling		Chiller			
Electrical Service	Power Supply	220V-50/60Hz-10A	220V-50/60Hz-10A	220V-50/60Hz-16A	220V-50/60Hz-16A
	Chiller	220V-50/60Hz-16A		220V-50/60Hz-16A	220V-50/60Hz-16A
Umbilical Length		3m			

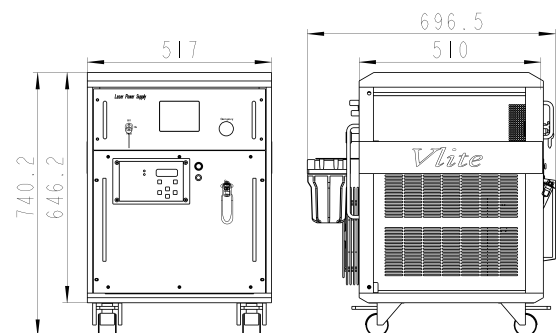
- i** 1. Full width half max (FWHM);
 2. Measured at the laser output;
 3. 100% Pulse to Pulse energy stability measured over 1 hour;

4. Full angle measured at 1/e² of the peak;
 5. With respect to external trigger;

Dimensions



Vlite-Hi-527



Power Supply & Cooling System