

VShot series

Flashlamp-pumped PIV lasers



VShot series provide flash lamp pumped PIV lasers with a unique design of the suspended oscillator and high structural stability. The series of lasers can adapt to outdoor working in high and low temperature environment, without the need for re coupling adjustment after long distance transportation

FEATURES

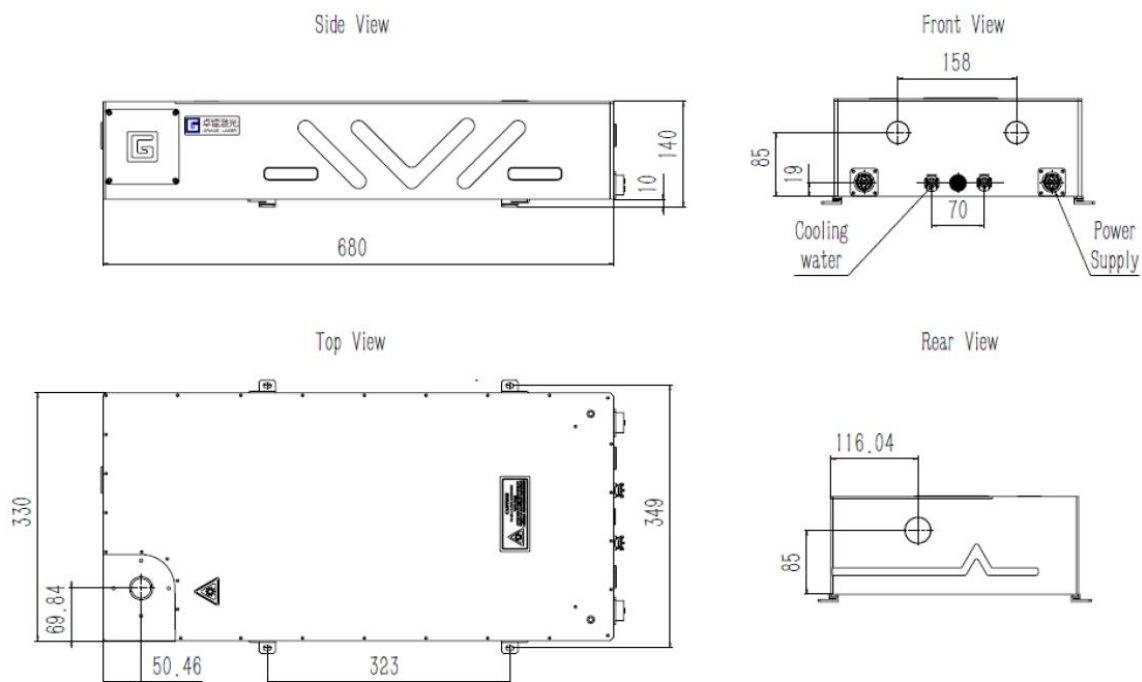
- **Pulse-pair** output **200-800mJ** at 1064nm / **100-450mJ** at 532nm, 3rd and 4th harmonics available
- **10Hz/15Hz** (up to 100Hz) repetition rate / **6-8 ns** pulse duration
- Diffraction ring eliminating Gaussian Mirror to provide outstanding Top hat spatial profile with **uniform transverse field distribution**
- **Low timing jitter** configuration
- Compact and reliable two independent resonators structure ensures long-term thermal and mechanical stability

APPLICATIONS

- PIV applications
- LIF applications

VShot-450 Laser Head Mechanical Specifications

Unit: mm



VShot series Specifications



Flashlamp-pumped PIV lasers

Beam characteristics

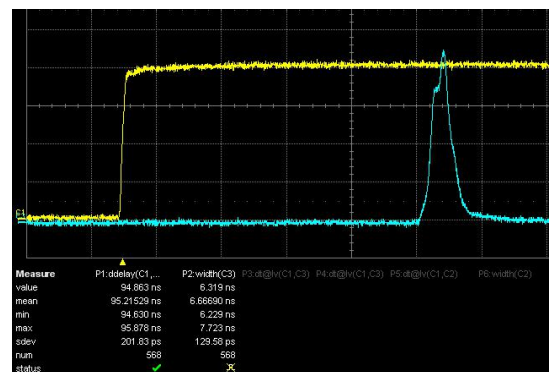
Version	VShot-200	VShot-450	VShot-H100	VShot-H200
Repetition Rate ¹ (Hz)	10Hz/15Hz	10Hz	100Hz	100Hz
Energy (mJ)	Each rail			
1064nm	360	800	200	360
532nm	200	450	100	200
Energy Stability RMS (%)				
1064nm	0.7%		1.7%	
532nm	1.2%		3.0%	
Power Drift ² (%)				
1064nm	3%			
532nm	5%			
355nm	8%			
Pulsewidth FWHM ³ (ns)	6-8ns @532nm		10-12ns @532nm	
Divergence ⁴ (mrad)	<0.6mrad (VRM mode) <3mrad (Multimode)			
Beam Pointing Stability ⁵ (μrad)	<20μrad		<30μrad	
Timing Jitter RMS ⁶ (ns)	<0.3ns		<0.5ns	
Beam Diameter (mm)	~7	~8	~6	~6.5
Beam Spatial Profile	VRM mode or Multimode			
Polarization	linear			

General characteristics

AC Input	220 VAC ±5% 50-60Hz
Power Consumption	<1.5kW (typical 450mJ at 532nm/10Hz)
Operating Conditions	Temperature 5-35°C Humidity <80%

NOTES

- 1.All specifications at 532nm and 10Hz repetition rate unless otherwise noted.
- 2.Average in 8 hours with room temperature variation $\delta T < 3^{\circ}\text{C}$.
- 3.Full width at half maximum.
- 4.Full angle for 86.5% of energy.
- 5.Maximum deviation from beam mean centroid.
- 6.With respect to external trigger.



Timing Jitter & Pulse width

China

Grace Laser Technology Co., Ltd.

Building 16, No.8 Anping North Street, Shunyi District, Beijing 101318 China

Tel: +86 010-60401920 Fax: +86 010-60401720 Email: sales@gracelaser.com

