

## BLAZER series

### High-power industrial ps-laser



#### FEATURES

- 30-50W at 1064nm / Harmonics from 532nm to 355nm
- 200-1000 kHz repetition rate / 15 ps pulse duration
- High beam quality  $M^2 < 1.3$
- Compact, sealed and rugged industrial grade design
- Fully detachable umbilical
- Burst mode
- Integrated process shutter

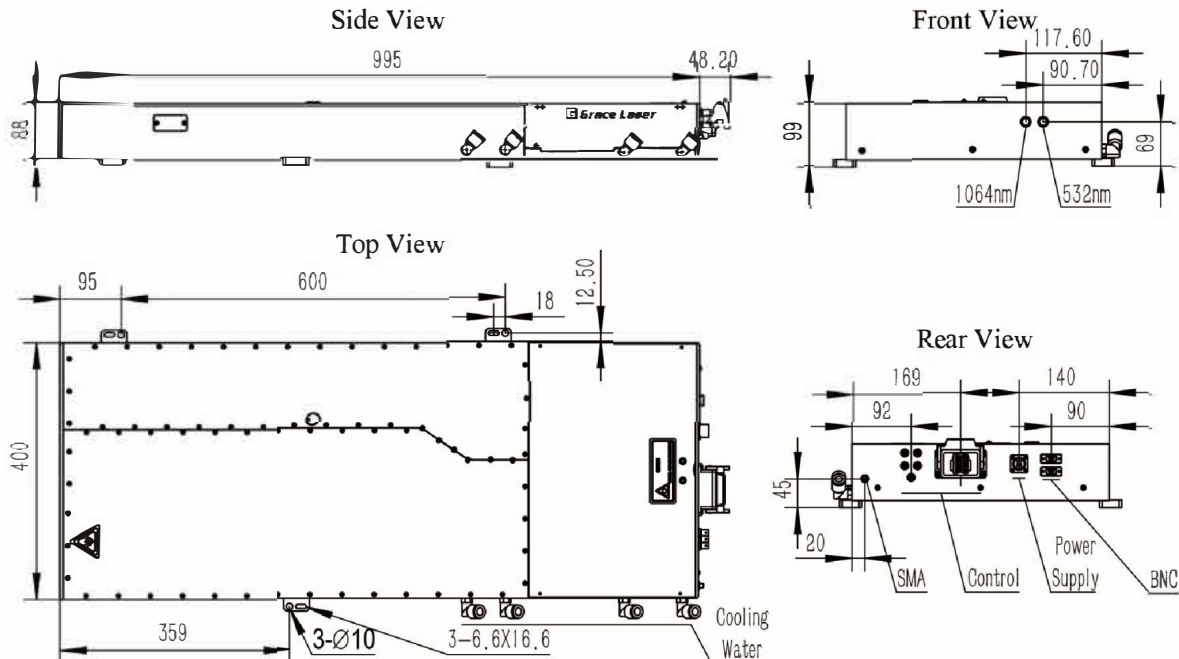
*BLAZER series provide industrial grade DPSS picoseconds lasers with adjustable repetition rate and high peak power. Rugged and compact design of these lasers have been a versatile tool for a variety of industrial material processing applications.*

#### APPLICATIONS

- Cutting and drilling for Materials such as glass, sapphire
- Thin film ablation
- Micromachining
- Patterning

#### BLAZER-50 Laser Head Mechanical Specifications

Unit:mm



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### Beam characteristics

Version	BLAZER-30			BLAZER-50		
Wavelength (nm)	1064nm (532/355 option)					
Repetition Rate <sup>1</sup> (kHz)	200 – 1000 kHz					
Average Power (W)	Average Power (W) at Different Rep. Rates <sup>2</sup>					
Wavelength (nm)	200kHz	500kHz	800kHz	400kHz	600kHz	800kHz
1064nm	25	30	30	50	50	50
532nm <sup>3</sup>	15	15	13	30	25	21
355nm	6	10	9	10	16	15
Pulse Energy (μJ)	Pulse Energy (μJ) at Different Rep. Rates					
Wavelength (nm)	200kHz	500kHz	800kHz	400kHz	600kHz	800kHz
1064nm	125	60	38	125	83	63
532nm	75	30	16	75	42	26
355nm	30	20	11	25	26	19
Beam Spatial Profile	TEM <sub>00</sub> (M <sup>2</sup> <1.3)					
Pulsewidth (ps)	< 15ps@1064nm					
Energy Stability (RMS)	< 2%					
Power Stability <sup>4</sup> (RMS)	< 2%					
Polarization Ratio	> 100:1					
Beam Circularity (%)	> 85%					
Pointing Stability <sup>5</sup> (μrad/°C)	< 50μrad/°C					
Beam Divergence <sup>6</sup> (mrad)	< 1mrad					
Beam Diameter <sup>7</sup> (mm)	~3mm					

### General characteristics

AC Input	220 VAC ±5% 50-60Hz
Power Consumption	< 2.5kW (typical 50W at 500kHz)
Cooling Type	Closed-loop water cooling
Operating Conditions	Temperature 15-35 °C Humidity < 65%
Warm-Up Time (mins)	< 40mins

### NOTES

1. All specifications at 1064nm and 500kHz repetition rate unless otherwise noted.
2. Please provide operating Rep. rate for optimum output power.
3. A lower 532nm output power version to be offered if need both 532nm & 355nm.
4. Average in 8 hours with room temperature variation  $\delta T < 3 \text{ }^\circ\text{C}$ .
5. Maximum deviation from beam mean centroid.
6. Full angle for 86.5% of energy.
7. Output of laser head at 1064nm.

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### China

#### Grace Laser Technology Co., Ltd.

Ju Hong BLDG B, Area B, Airport Industrial Park, Shunyi District, Beijing, China  
 Postcode: 101318

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

Web: [www.gracelaser.com](http://www.gracelaser.com)

