

RGL Series

High Pulse Energy and High Repetition Rate Picosecond Laser



Features

- Variable repetition rate: single shot to 5kHz
- Excellent beam quality ($M2 < 1.3$)
- Small form factor, compact
- Industrial grade
- Diode pumped technology
- Wide range of powers and harmonic options available
- All-in-one single box design

Applications

- Process difficult materials
- Metal welding, cutting and deburring
- Improved micro and meso-machining quality with less dross
- Cold ablation of materials with less “heat affected zone” than conventional nanosecond DPSS
- Improve cut quality and throughput for medical applications (i.e. heart stents)
- Stereo lithography
- LIDAR
- Satellite Laser Ranging (SLR)

System Specifications

Model Number	RGL-1064-2	RGL-1064-4
Wavelength (nm)	1064	
Pulse Energy (@1 kHz)	2 mJ	4 mJ
Average Power (@ 1 kHz)	2 W	4 W
Beam Divergence	<1 mrad	
Pulse Width*	<25 ps	50 ps (nominal)
Repetition Rate	Single Shot to 5 kHz	
Spatial Mode	TEM ₀₀ M ² <1.3	
Long Term Stability (8h±3 °C)	< ±2%	
Pulse to Pulse Stability	< 2% rms	
Output Beam Diameter	1.7 mm (nominal)	
Beam Ellipticity	< 10%	
Beam Point Stability	< 50 urad	
Ambient Temperature	15 to 30°C(59 to 86 °F) Operating Range	
Relative Humidity	Non-condensing, 90% Max	
Cooling	Closed Loop Chiller	
Dimensions (W x H x L)†	10" x 3.75" x 33.5"	
Interface	Ethernet / RS 232 / GUI / External TTL Triggering	

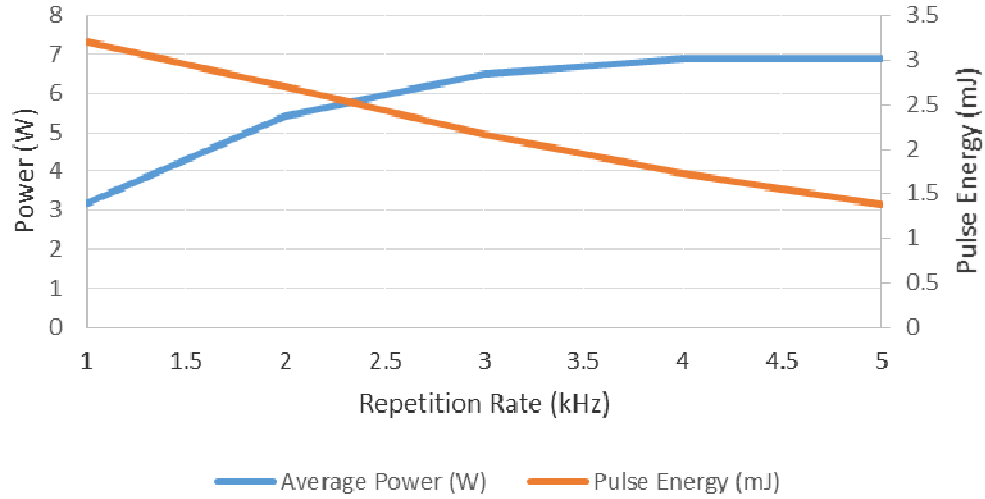
Model Number	RGL-532-1.5	RGL-532-2.5
Wavelength (nm)	532	
Pulse Energy (@1 kHz)	1.5 mJ	2.5 mJ
Average Power (@ 1 kHz)	1.5 W	2.5 W
Beam Divergence	<1 mrad	
Pulse Width*	<25 ps	50 ps (nominal)
Repetition Rate	Single Shot to 5 kHz	
Spatial Mode	TEM ₀₀ M ² <1.3	
Long Term Stability (8h±3 °C)	< ±2%	
Pulse to Pulse Stability	< 2% rms	
Output Beam Diameter	1.7 mm (nominal)	
Beam Ellipticity	< 10%	
Beam Point Stability	< 50 urad	
Ambient Temperature	15 to 30°C(59 to 86 °F) Operating Range	
Relative Humidity	Non-condensing, 90% Max	
Cooling	Closed Loop Chiller	
Dimensions (W x H x L)†	10" x 3.75" x 33.5"	
Interface	Ethernet / RS 232 / GUI / External TTL Triggering	

* Longer pulse width available upon request.

† Exclude height of desiccant (0.3 in)

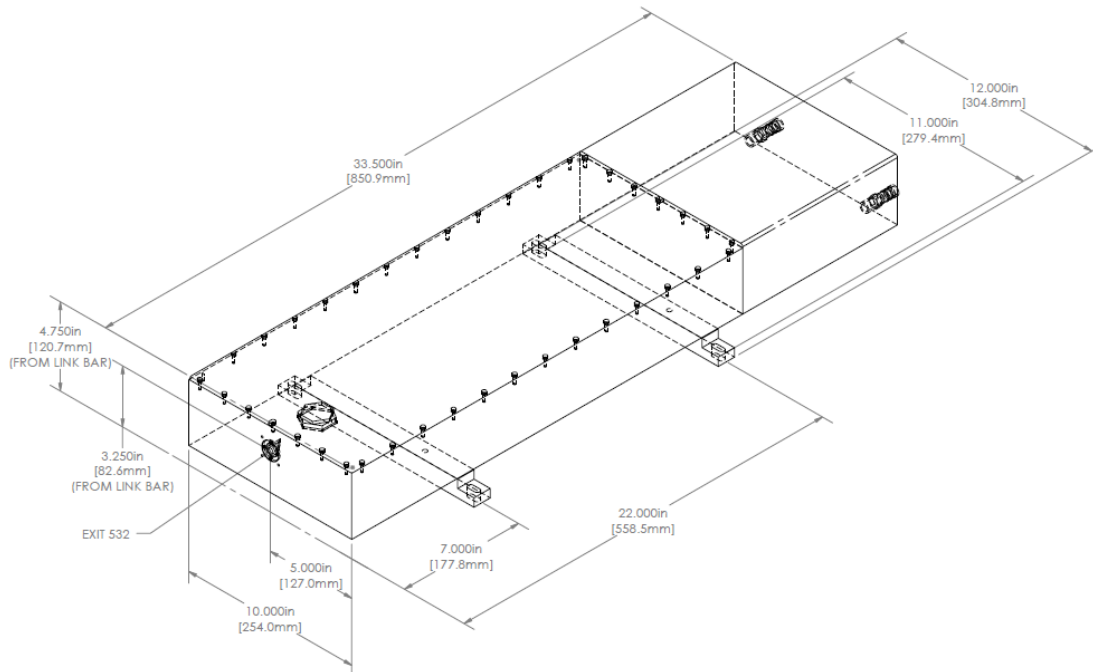
Performance Curve

RGL-532-2.5



Dimensional Drawing

RGL AIO Laser



United States

PI Main Headquarter Office
1800 Ocean Ave, Ronkonkoma
NY 11779, USA
Website: www.photonix.com
Tel: +1-631-218-2240
Fax: +1-631-218-2275
Email: info@photonix.com

China Suzhou

PI China Branch Office (PIC)
No 2 Rui'en Lane, Xingpu Rd.
Suzhou Industrial Park
Suzhou 215021, P. R. China
Tel: +86-512-6763 5761
Fax: +86-512-6763 5762
Email: joeyu@photonix.com

Korea

PI Korea Branch Office (PIK)
703 Sogong Bldg, 352-5 Gugal-Dong
Giheung-gu, Yongin City
Gyeonggi-Do, 446-569 Korea
Tel: +82-31-284-9520
Fax: +82-31-284-9521
Email: kimsm@photonix.com

China Dongguan

Photonics Laser Technology Dongguan
12 East Industrial Road
Songshanhu High Tech Distr.
Dongguan, Guangdong, China
Tel: +86-18682342052
Fax: +86-0769 22897186
Email: joeyu@photonix.com

Japan

PI Japan Branch Office (PIKK)
Rokusan Bldg. 9F, Funamachi 7
Shinjuku-ku, Tokyo 160-0006, Japan
Website: www.photonix.com
Tel: +81-03-6423-1805
Fax: +81-03-6423-1806
Email: asakurazawa@photonix.com

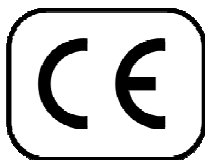
Taiwan

PI Taiwan Branch Office (PIT)
18F-3, No.77,Sec.1,Xintai 5th Rd.
Xizhi Dist., New Taipei City 221, Taiwan
Website: www.photonix.com.cn
Tel: +886-2-26983620
Fax: +886-2-26983630
Email: bchiang@photonix.com

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Rayture Systems



レイチャーシステムズ株式会社

〒160-0006 東京都新宿区舟町7 ロクサンビル7F

TEL : 03-3351-0717 FAX : 03-3351-6771

URL : <http://www.rayture-sys.co.jp>

E-mail : laser@rayture-sys.co.jp