

# RGL Series

High Pulse Energy and High Repetition Rate Picosecond Lasers



## Features

- Variable Repetition Rate: Single Shot to 5 kHz
- Excellent Beam Quality ( $M^2$  typically  $<1.3$ )
- Small Form Factor, Compact Laser Head
- Industrial Grade
- Diode Pumped Technology
- Wide Range of Powers and Harmonic Options Available

## Applications

- Process Difficult Materials
  - Quartz, other glasses
  - Ceramics
  - CIGS
- 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 (e.g. heart stents)
- Stereo Lithography
- LIDAR
- Satellite Laser Ranging (SLR)



# RGL Specifications

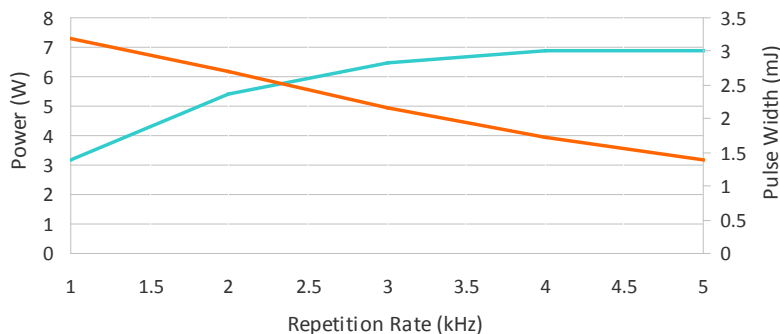
Wavelength (nm)	1064nm	
<b>Model Number</b>	<b>RGL-1064-1.5</b>	<b>RGL-1064-4</b>
Pulse Energy (@ 1 kHz)	1.5 mJ	4 mJ
Average Power (@ 5 kHz)	5 W	10 W
Beam Divergence	<3 mrad	
Wavelength (nm)	532nm	
<b>Model Number</b>	<b>RGL-532-1</b>	<b>RGL-532-2.5</b>
Pulse Energy (@1 kHz)	1 mJ	2.5 mJ
Average Power (@ 5 kHz)	3 W	5 W
Beam Divergence	<1 mrad	
Wavelength (nm)	355nm	
<b>Model Number</b>	<b>RGL-355-0.5</b>	<b>RGL-355-1</b>
Pulse Energy (@ 1 kHz)	0.5 mJ	1 mJ
Average Power (@ 5 kHz)	1.5 W	3 W
Beam Divergence	<1 mrad	

## Common Specifications

Pulse Width*	<25 ps	50 ps (nominal)
Repetition Rate	Single Shot to 5 kHz	
Spatial Mode Profile	TEM <sub>00</sub>	
M2	<1.3	
Long Term Instability (8h±3 °C)	<±2%	
Pulse to Pulse Stability	<2% rms	
Output Beam Diameter	1.7 mm (nominal)	
Beam Ellipticity	<10%	
Beam Point Instability	<50 urad	
Ambient Temperature	15 to 30 °C (59 to 86 °F) Operating Range	
Relative Humidity	Non-condensing, 90% Max	
Cooling	Closed Loop Chiller	
Laser Head Dimensions	10"(W) x 3.75"(H) x 32"(L)	
Controller Dimensions	19"(W) x 5.25"(H) x 13.5"(D)	

\* Longer pulse width available upon request.

### RGL-532-2.5



— Average Power (W) — Pulse Energy (mJ)

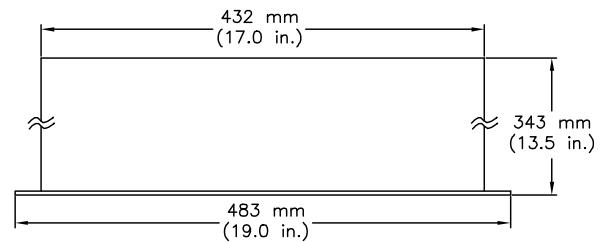
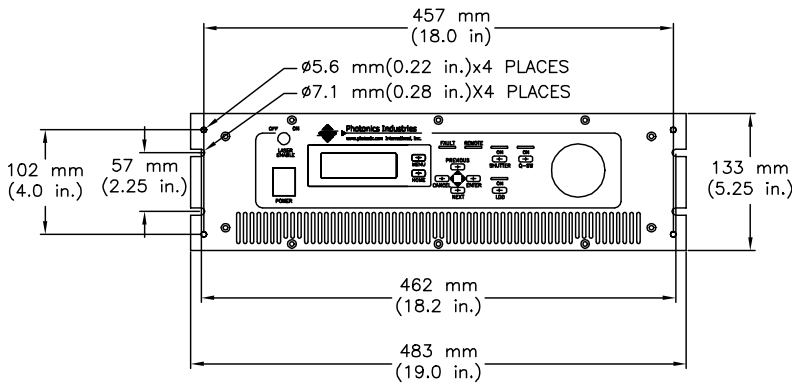
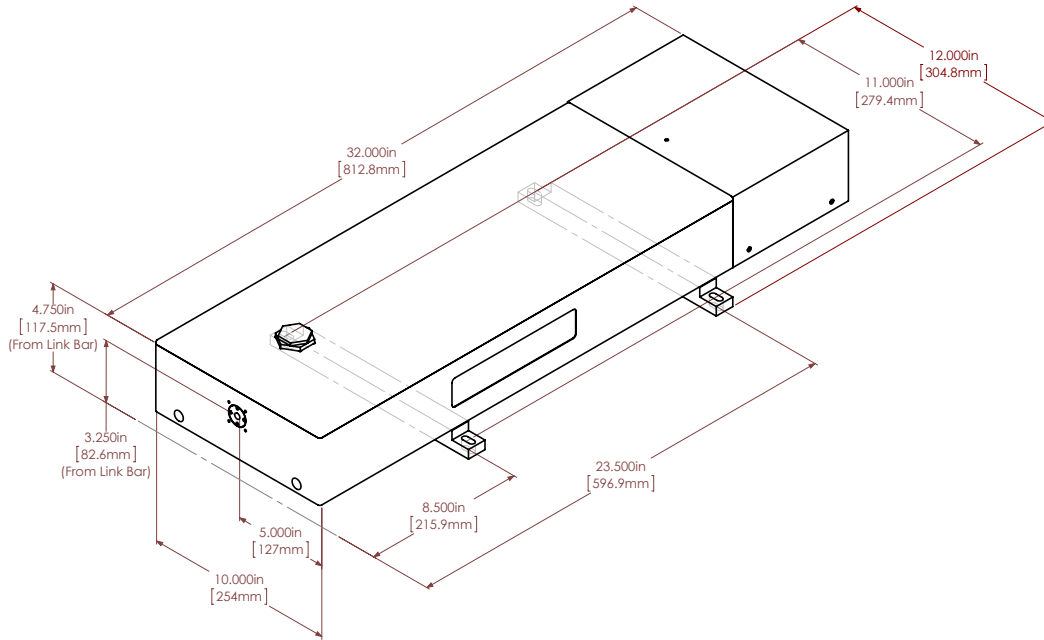


**Photonic Industries**  
International, Inc.

1800 Ocean Ave. Ronkonkoma, NY 11779  
E-Mail: info@photonix.com

Phone: 631-218-2240 Fax: 631-218-2275  
Website: www.Photonix.com

# Dimensional Drawings



## US Main Office

1800 Ocean Ave, Ronkonkoma, NY, 11779  
 Phone: 631-218-2240  
 Fax: 631-218-2275  
 E-Mail: [info@photonix.com](mailto:info@photonix.com)  
 Website: [www.Photonix.com](http://www.Photonix.com)

## Korea Office

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  
 Contact: Sang-Moon Kim  
 Email: [kimsm@photonix.com](mailto:kimsm@photonix.com)

## Japan Office

Rokusan Bldg. 9F, Funamachi 7  
 Shinjuku-ku, Tokyo 160-0006, Japan  
 Tel: +81 03-6423-1805  
 Fax: +81 03-6423-1806  
 Email: [kseita@photonix.co.jp](mailto:kseita@photonix.co.jp)

## China Office

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: [china@photonix.com](mailto:china@photonix.com)  
 Website: <http://www.photonix.com.cn>

## Taiwan Office

18F-3, No.77,Sec.1,Xintai 5th Rd.  
 Xizhi Dist., New Taipei City 221, Taiwan  
 Tel:886-2-26983620  
 Fax: 886-2-26983630  
 Contact: Brett Chiang  
 Email: [bchiang@photonix.com](mailto:bchiang@photonix.com)

Due to Photonics Industries' commitment to continuous product improvement, specifications and drawings are subject to change without notice.

Photonics Industries conforms to provisions of US 21 CFR 1040.10 & 1040.11 and is made under one or more US patents listed below:  
 7,346,092; 7,082,149; 7,079,557; 6,999,483; 6,980,574; 6,961,355; 6,842,293; 6,762,405; 6,690,692; 6,587,487; 6,584,487; 6,366,596;  
 6,327,281; 6,356,578; 6,246,707; 6,229,839; 6,108,356; 6,061,370; 6,028,620; 5,936,938; 5,898,717 and Pending Patents

Copyright © 2015 by Photonics Industries International, Inc.



**Photonics Industries**  
 International, Inc.