

### Diode-Pumped Q-Switched Laser Systems

The Everest laser is a diode-pumped, solid-state laser that delivers IR, green and UV wavelengths reliably and consistently. Designed from the beginning for use in a 24/7 manufacturing environment, Everest lasers offer a no-compromise solution to various material processing applications.

Boasting the shortest pulse width of commercial Q-switched lasers, Everest achieves the highest peak power, thereby minimizing peripheral thermal effects such as burring, melting or charring. Low cost of ownership is evident in the high average output power and high repetition rates, which allow for increased throughput and hence lower operating costs.

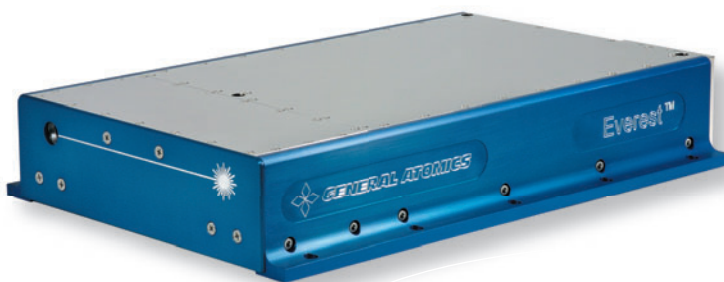
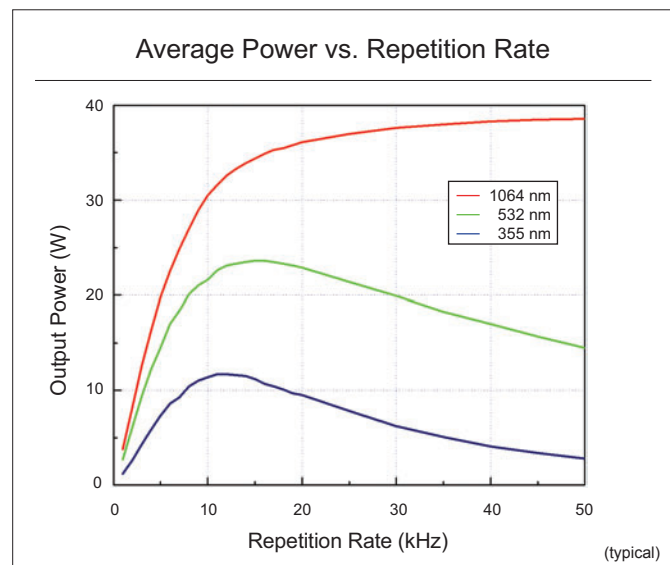
Everest lasers' high pulse-to-pulse energy stability ensures constant results no matter what the application or environment. A low  $M^2$  enables near diffraction limited focusing. RS-232 availability allows for monitoring and optimizing the performance of Everest lasers easy, allowing for maximum up-time.

With efficient conversion into the visible and ultraviolet, Everest lasers can be configured to meet the needs of many laser-based processes.

Everest offers the peak in reliability, consistency and performance.

#### FEATURES

- High performance: 625 kW peak power
- 1 to 50 kHz repetition rates
- Rugged, industrial design
- Long diode lifetime
- Simple field replacement of fiber-coupled pump diodes
- Touch screen system control and RS-232 interface



### Everest® System Specifications<sup>3</sup>

	Everest 1064	Everest 532	Everest 355
Wavelength (nm)	1064	532	355
Energy per pulse <sup>1</sup>	2.5 mJ	1.5 mJ	800 µJ
Pulsewidth (FWHM) <sup>1</sup>	4 ± 1 ns	4 ± 1 ns	4 ± 1 ns
Repetition Rate (kHz)	1 to 50	1 to 50	1 to 50
Peak Power (kW)	625	375	200
Average Power <sup>1</sup>	25 W	15 W	8 W
Beam Diameter, @ 1/e <sup>2</sup> , (mm)	0.7	0.7	0.7
Beam Profile	TEM <sub>00</sub>	TEM <sub>00</sub>	TEM <sub>00</sub>
Spatial Mode (M <sup>2</sup> )	< 1.3	< 1.3	< 1.3
Polarization (>100:1)	Horizontal	Vertical	Vertical
Beam Pointing Stability (µrad)	< 75	< 75	< 75
Pulse-to-Pulse Stability <sup>2</sup>	< 5%	< 5%	< 5%
Beam Divergence (mrad)	< 3.5	< 1.5	< 1.5

### Everest Utility and Environmental Specifications<sup>3</sup>

Operating Voltage	220 VAC - Single Phase
Power Consumption	5.0 kW
Line Frequency	50 – 60 Hz
Cooling	Chiller included in rack, no external water required
Weight	
Laser Head	18.14 kg (40 lbs)
Power Supply + Chiller	63.50 kg (140 lbs)
Temperature Operating	18 – 35 °C
Humidity Operating	8 – 95 %
Umbilical Cord Length	10 m

<sup>1</sup> Measured at 10 kHz

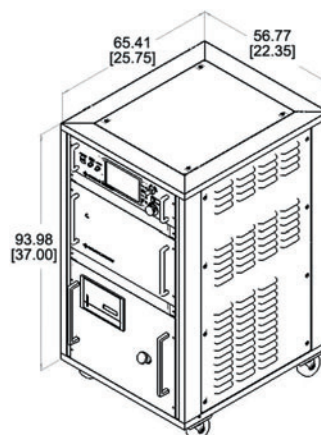
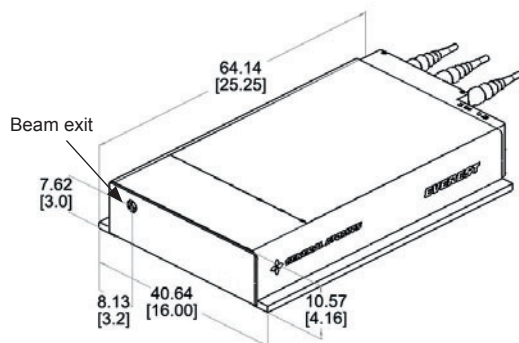
<sup>2</sup> rms up to 10 kHz

<sup>3</sup> General Atomics follows a policy of continuous product improvement. Specifications are subject to change without notice.

## Mechanical Specifications

All dimensions in cm and [inches]

Note: Rack height is not inclusive of casters or lifting hardware.



For more information please visit  
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General Atomics' scientific and industrial lasers comply with the US standards established by the Center for Devices and Radiological Health (CDRH) for a class IV laser device. Complies with CFR 1040.10 and 1040.11 as applicable.

