

GxJ laser line

The GxJ series comprises lasers based on a Nd:YLF oscillator and Phosphate Glass amplifiers. The lasers produce near-diffraction limited single-longitudinal mode super-gaussian radiation in the nanosecond regime from 2 to 16 J per pulse (fundamental harmonic) and from 1 J to 8 J per pulse (second harmonic). Design features include a highly stable passively Q-switched ring-cavity oscillator, 2-pass amplification using ultra-high energy threshold Brillouin phase conjugation mirror and optional frequency conversion to the second or third harmonics by DKDP. In addition to constituting highly versatile laboratory tools all GxJ lasers are rigorously designed to meet the high standards required for display and technical holography applications.

Options

- Built-in digital energy meter;
- Control of all functions from a PC;

System Features

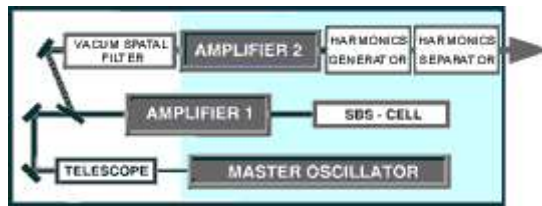
- Wireless Remote Control
- LCD Pulse Counters
- Digital Count-Down to Next Pulse
- Low Energy Pilot Mode for Alignment
- Programming of Amplifier and Oscillator Voltages
- Push-Button Selection of Pilot and High Energy Modes
- Laser-Coolant Temperature Stabilization with digital Read-out
- CE compliant



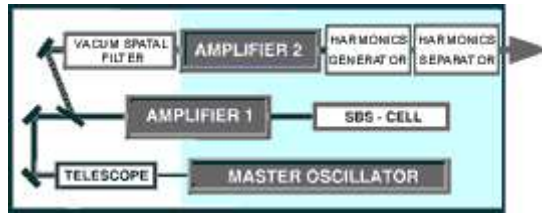
Technical Parameters of the most popular models

Model	G2J	G5J
Output Wavelength:	1053 nm 526.5 nm 351 nm	1053 nm 526.5 nm 351 nm
Max Output Energy:	4J; 2J; 1J	10J; 5J; 2.5J
Pulse Duration:	30 ns	30 ns
Beam Diameter (1/e ²):	<10 mm	<16 mm
Beam Divergence:	Near Diffraction Limit	Near Diffraction Limit
Coherence Length:	>5 m	>5 m
Repetition Rate		
(a) Pilot Mode:	0.5...2 Hz	0.5...2 Hz
(b) General Mode:	1 pulse per 3 mins	1 pulse per 3 mins
Laser Head Size:	1100 x 350 x 250 mm	1100 x 450 x 250 mm
Laser Head Weight:	<28 Kg	<47 Kg
Flash Tube Lifetime		
(a) Oscillator:	5 x 10 ⁶ shots	5 x 10 ⁶ shots
(b) Amplifier 1:	5 x 10 ⁶ shots	5 x 10 ⁶ shots
(c) Amplifier 2:	N/A	5 x 10 ⁶ shots
Advised Operating Temperature:	20 °C	20 °C
Advised Operating Humidity:	<60% non-condensing	<60% non-condensing
Warranty Period:	12 months	12 months
Geola reserves the right to change specifications without notice		

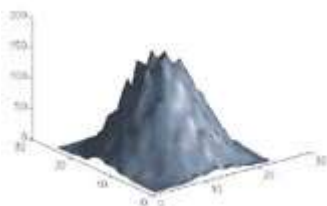
Optical Schemes and Characteristics



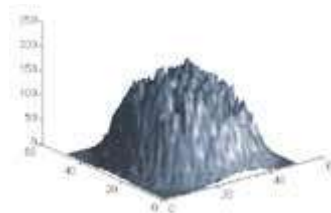
Optical Scheme for Model G2J



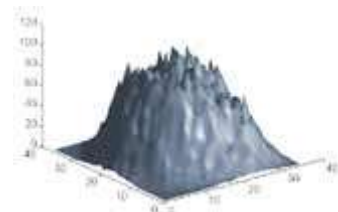
Optical Scheme for Model G5J



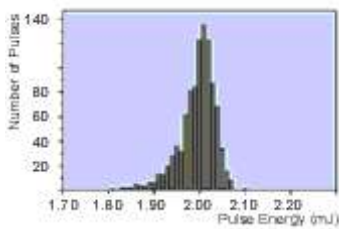
Pilot Mode (All models)
Typical Energy Distribution at a
10m distance from the laser
output.



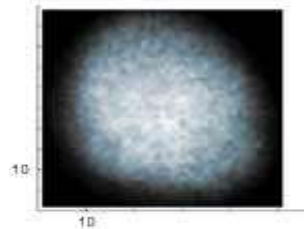
High Energy Mode (G2J,
E=2J)
Typical Energy Distribution -
Near-Field



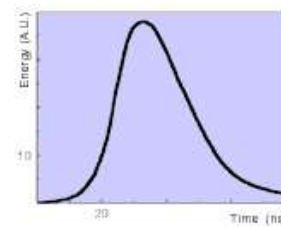
High Energy Mode (G2J,
E=2J)
Typical Energy Distribution
at 10m distance from the
laser output.



Histogram showing shot to
shot Energy
Stability for the GxJ Oscillator
(526.5nm)



Typical Near Field
Distribution
(G5J E=5J - 526.5nm)



Typical Temporal Pulse
Shape
(G5J - 526.5nm)