

# Lucia

## Diode-pumped, Q-Switched Nd:YLF Green Laser



### FEATURES

- No DI water requirement
- Long-life diode module
- Rugged design, high reliability
- Average output up to 45 W
- Smooth beam profile at focus
- Best stability for scientific research
- Ideal for Ti:Sapphire pumping

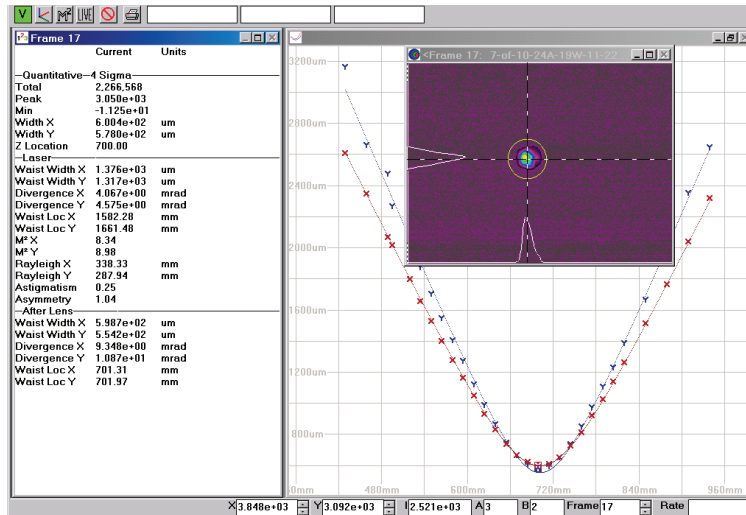
### APPLICATIONS

- Ultrafast pumping
- PIV
- Material processing
- Micromachining
- Laser ultrasonics

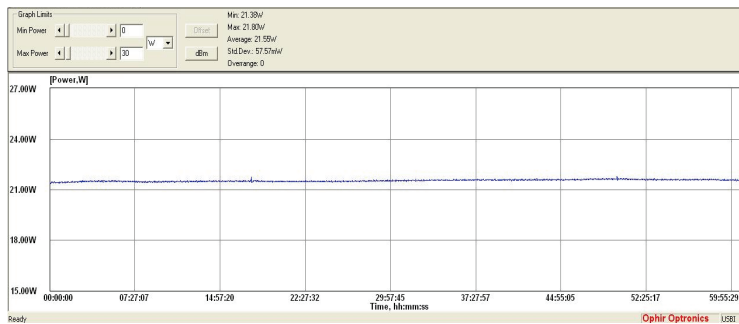
The Lucia series are diode-pumped, Q-switched second harmonic Nd:YLF lasers. They feature field-proven long-life diode module and no DI water requirement for water chiller. The rugged enclosure design and optimum cavity design result in excellent output stability as well as increased reliability for long-term operation. The Lucia-30-M delivers more than 20mJ at 1 KHz and more than 30W average power at 3KHz. The Lucia-45-M delivers more than 28mJ at 1KHz and more than 45W average power at 3KHz. It is optimized for ultrafast Ti:sapphire amplifier pumping, such as UpTek Solutions' Phidia -1 series.

Lucia is pumped by a high-end long-life laser diode module. The standard Lucia has enough margin to compensate the power drop as the diode module ages. Lucia works with an all-digital controller, Phi-10, to provide laser protections against low/high trigger repetition rate, insufficient water cooling and so on. The Lucia provides optimum solutions for scientific as well as industrial customers for applications, such as ultrafast amplifier pumping, PIV, material processing, micromachining, etc.

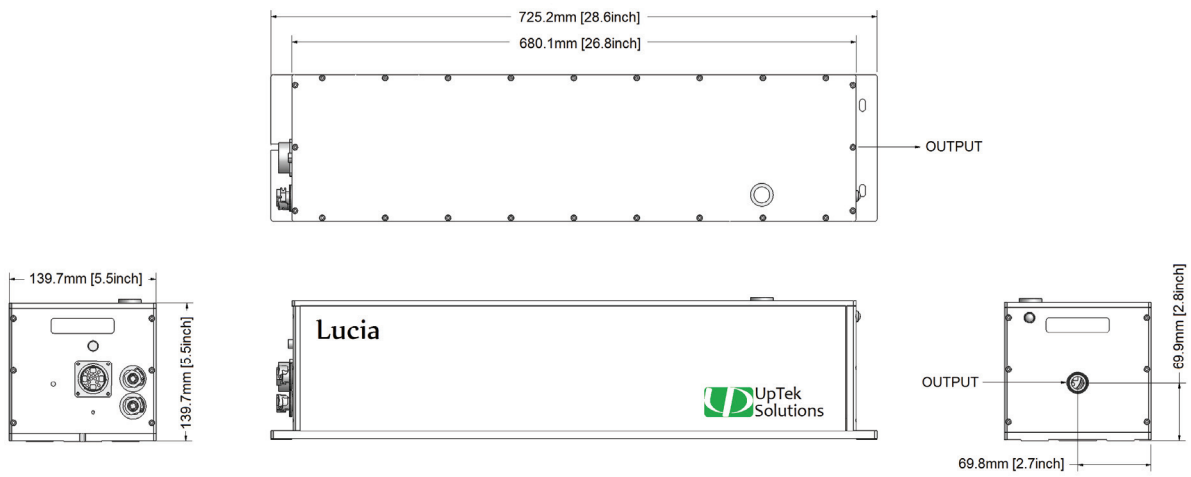
	Lucia-30-M	Lucia-45-M	Lucia-10-0
Pulse Energy/Power	>20 mJ@1KHz	>28 mJ@1KHz	>10 mJ@1KHz
Repetition Rate	1-10 KHz	1-10 KHz	1-10 KHz
Wavelength	527 nm	527 nm	527 nm
Pulse Width	<200 ns	<300 ns	<100 ns
Spatial Mode	M <sup>2</sup> <16	M <sup>2</sup> <16	M <sup>2</sup> <1.2
Beam Size (1/e <sup>2</sup> )	~ 3 mm	~ 3 mm	~1 mm
Energy Stability	<0.5 % RMS	<0.5 % RMS	<0.5 % RMS
Polarization	Linear, Horizontal	Linear, Horizontal	Linear, Horizontal



Lucia-30-M Output Beam Quality Measurement



Lucia-30-M Output Power Stability Measurement (60 hrs)



Lucia Footprint