

TRLi G HP Range

Super Gaussian Series Compact High Energy Q-switched Pulsed Nd:YAG Lasers

Applications include

OPO Pumping
Ti:Sa Pumping
Dye Laser Pumping
Deflashing
Cleaning
Spectroscopy
LIBS
LIDAR
Flash Photolysis
Ablation
PLD
Photoacoustic Imaging

TRLi G HP features

- Plug and play interchangeable harmonic modules to 266nm
- Twin-rod architecture for high beam homogeneity
- Intelligent motorised auto-tuning of harmonics
- Auto-stabilisation for 'set and forget' operation
- Integrated motorised attenuator
- Easy connections and fast start up
- High energy high repetition rate output
- Super Gaussian-coupled resonator
- Rugged industrial design
- LUCi touchscreen or PC control interface



TRLi G HP Range

Model options

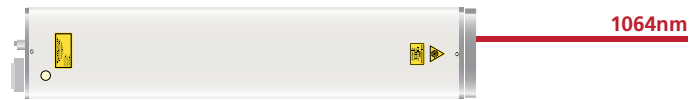
All model options are available with harmonic auto-tuning, auto-stabilisation and variable motorised attenuators.

Other model options include:

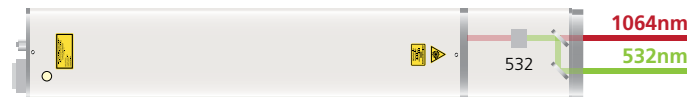
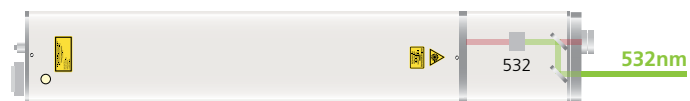
Built-in harmonic diode pointer.

Fully motorised hands free auto wavelength switching option with 532, 355, and 266nm available as a single unit.

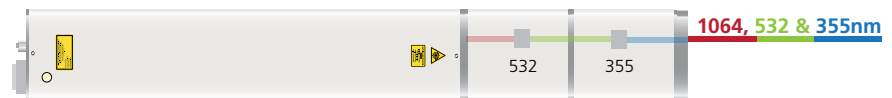
Options for 1064nm output



Options for 532nm output



Options for 355nm output

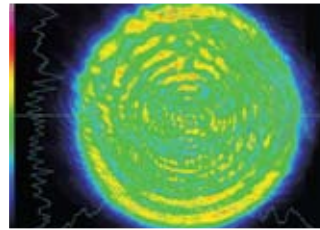


Options for 266nm output

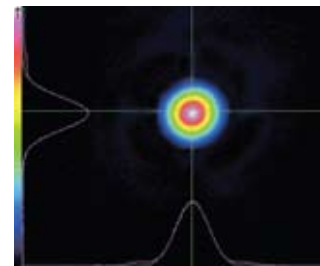


TRLi G HP RANGE SPECIFICATIONS

Model	TRLi G HP 350-30	TRLi G HP 320-50
Repetition Rate (Hz)	30	50
Output Energy (mJ)		
1064nm	350	320
532nm	175	160
355nm ¹	70	60
266nm	40	30
Pulse Stability (±%) [RMS] ²		
1064nm	2 [0.6]	2 [0.6]
532nm	3 [1]	3 [1]
355nm	4 [1.3]	4 [1.3]
266nm	6 [2]	6 [2]
Power Drift (±%) ³		
1064nm	3	3
532nm	5	5
355nm	5	5
266nm	10	10
Pulse Duration (ns) ⁴		
1064nm	~6	~6
532nm	~5	~5
355nm	~5	~5
266nm	~5	~5
Beam Parameter		
Beam Diameter (mm) ⁵	6.5	6.5
Beam Divergence (mrad) ⁶	0.5	0.5
M ² @ 1064nm ⁷	<2	<2
Pointing Stability (μrad) ⁸	<70	<70
Timing Jitter (ns) ⁹	<0.5	<0.5
Linewidth @ 1064nm (cm-1)	<0.7	<0.7
Polarisation Ratio (%)	>90	>90
Spatial Profile Near Field ¹⁰	>0.75	>0.75
Spatial Profile Far Field ¹¹	>0.95	>0.95
Lamp Life (pulses)	10 ⁸	10 ⁸
Services		
Voltage	220-250VAC	220-250VAC
Frequency	50/60Hz	50/60Hz
Power Phase	Single	Single
Cooling	Air Cooled	Air Cooled
Ambient Temp ¹²	8-30°C	8-30°C
PSU Type	LPU1000	LPU1000



Near Field at 1064nm



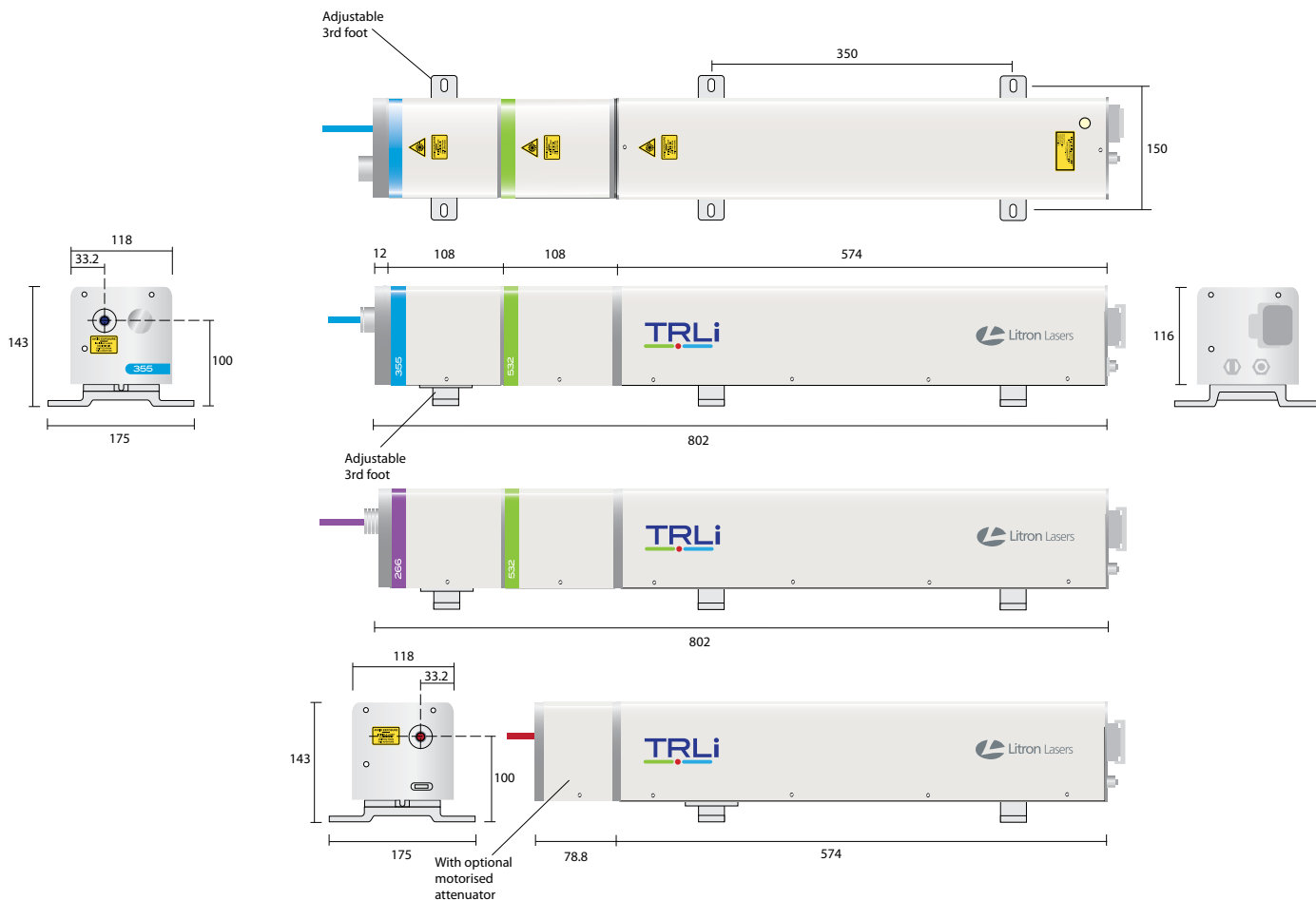
Far Field at 1064nm >95% Gaussian fit.

1. High energy 355nm as standard with standard 2HG module.
2. Peak to Peak Energy - 100% of pulses.
3. 8 Hours continuous running without adjustment.
4. FWHM - Fast photodiode and >1Ghz oscilloscope.
5. 100% diameter at laser exit port.
6. Full angle for 90% of the output energy.
7. Measured using ISO 11146-1:2005.
8. Measured using ISO 11146-1:2005.
9. Jitter is measured with respect to the Q-switch trigger input.
10. Least squared fit to Gaussian at ~ 0.4m from the laser output.
11. Least squared fit to Gaussian at the focus of a 1m lens.
12. 5 to 80% relative humidity (non condensing).

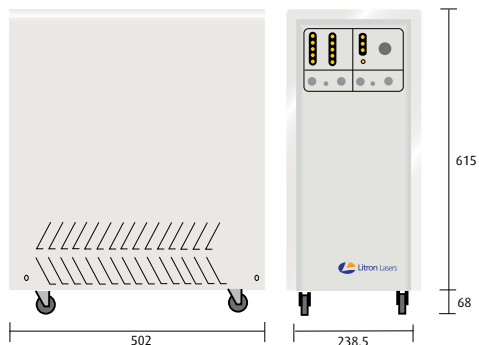
TRLi G HP RANGE MECHANICAL DATA

All dimension in mm unless stated.

Laser Head with Doubler, Tripler & Quadrupler Units



LPU1000 PSU



LUCi Remote Control Box



Our policy is to improve the design and specification of our products. The details given in this document are not to be regarded as binding.



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