TRLi Series

Compact high energy and high repetition rate Q-switched pulsed Nd:YAG lasers

**Applications include**
- OPO Pumping
- Ti:S Pumping
- Dye Laser Pumping
- Deflashing
- Cleaning
- Spectroscopy
- Photoacoustic Imaging
- LIBS
- LIDAR
- Flash Photolysis
- Ablation
- PLD

**TRLi series features**
- Plug and play interchangeable harmonic modules to 213nm
- 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 and high repetition rate models
- Super Gaussian, stable and stable-telescopic resonator options
- LUCi touchscreen or PC control interface
- Rugged industrial design
TRLi Series
The advanced technology behind the TRLi performance makes it first in its class for most applications.

Plug and play bolt-on harmonic modules
All the harmonic wavelengths of Nd:YAG (532nm, 355nm, 266nm and 213nm) are available via dedicated separate easy change modules for each wavelength.

Automatic harmonic tuning and auto-stabilisation
All harmonic modules are available with automatic harmonic tuning linked to the LUCi controller. All wavelengths are also available with optional auto-stabilisation. This feature maintains the set energy over long periods of continuous operation and includes a PSU control function to compensate for the lamp aging process.

Integrated motorised beam attenuator
A high resolution motorised variable attenuator is available. This provides continuous energy adjustment of the laser output without altering the beam spatial profile or focusing parameters.

Twin-rod architecture for high beam homogeneity
A twin-rod birefringence compensating oscillator design is standard on all TRLi series. This feature ensures the highest beam homogeneity possible. The benefits are seen in low $M^2$ (higher focusability), better beam profiles and more efficient harmonic conversion.

Intellihead laser function control
The Intelligent laser head uses a dedicated microprocessor card to provide precision control over a host of functions including harmonic temperature stabilisation, automatic harmonic tuning, energy monitoring and attenuator controls. The system continuously monitors the Intellihead card and the PSU microcontroller, providing feedback to the user via the LUCi controller.
The advanced technology behind the TRLi series is designed for flexibility and enhanced user experience.

**Fast set up and total control**
The laser head and LUCi controller connect directly to the PSU and the whole laser can be assembled and running in less than 15 minutes.

**LUCi touchscreen system control interface**
Full access to the control parameters and sensor feedback from the laser head and power supply are all via the intuitive LUCi touch screen user interface.

**Flexible and upgradable**
The standardised mechanical mounting system for the harmonics modules ensures add-on modules will always be available for your TRLi laser. The laser system firmware and LUCi software can also be easily upgraded via USB.

**Large model range**
The TRLi series encompasses both high energy (850mJ) and high repetition rate (200Hz) models. With the addition of Super Guassian, Telescopic and Stable-telescopic resonator choices, choosing a TRLi for your precise application could not be easier.

**User experience**
All TRLi lasers are sealed to IP54 against the ingress of moisture and dirt and extremely field rugged. Most systems are fully air cooled and require no external services except a mains electrical input.

A comprehensive 2 year warranty, long flashlamp lifetimes and the Litron guarantee of quality build make the TRLi series one of the easiest lasers to own and maintain.
**TRLi Series**

**Large flexible 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

Option for 213nm output

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.