PRODUCT PORTFOLIO

Litron Lasers

Designed for **Research**
Engineered for **Industry**

Litron Lasers has enjoyed continued growth and development since its inception in 1997 and now, more than 25 years later, we sit firmly at the forefront of solid state laser technology. An installed base of several thousand lasers spanning the globe is the result of many years development and interaction with our customers.

From the beginning Litron has developed lasers that can be operated 24/7 in the most demanding industrial environments. In order to supply a laser that is best suited to an application it is key to appreciate the process where it will be used. Litron's extensive knowledge of industrial and scientific applications enables the company to produce lasers ideally matching customer requirements.

Litron's standard laser designs lend themselves to easy customisation, yielding fast, cost-effective solutions. For some highly specialised applications Litron can utilise its in-house machining capability to offer bespoke laser products to encompass the customer's key design constraints in a timely fashion. To this end Litron continues to invest in key areas to maintain long term industrial OEM partnerships.

Litron is continually improving and extending its product range. Please visit **www.litronlasers.com** or contact us directly for the latest information and developments.

Ultra-compact Pulsed Nd:YAG Lasers
The Nano Series – Small in size, big in performance

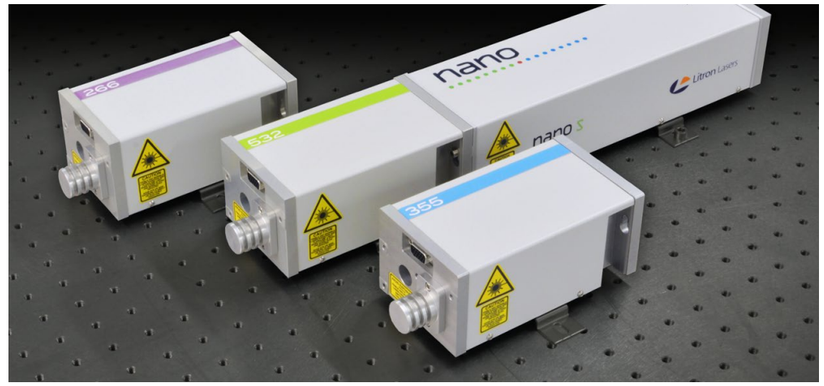
nano

FEATURES

- ***Output energies up to 340mJ***
- ***Repetition rates up to 100Hz***
- ***Choice of 3 resonators***
- ***Electronically verified safety shutter***
- ***2nd, 3rd, 4th and 5th harmonics***
- ***TEM_{00} option***
- ***Motorised variable attenuator***
- ***Compact and rugged***
- ***Diode pointer***
- ***LUCi touchscreen or PC interface***
- ***Long flashlamp lifetime and easy replacement***
- ***Air-cooled PSU (internal water)***

APPLICATIONS

- ***LIBS & Spectroscopy***
- ***Ablation***
- ***LiDAR & Remote sensing***
- ***ESPI***
- ***Pump source***
- ***Combustion research***
- ***Laser ultrasonics***
- ***PIV***



The **Nano series** comprise of compact and rugged Q-switched lasers suited to a multitude of applications including mask repair, LIBS, LiDAR, pump sources and spectroscopy.

With industry-leading performance in every respect, unsurpassed design and build quality, the Nano series sets the benchmark for ultra-compact laser systems today.

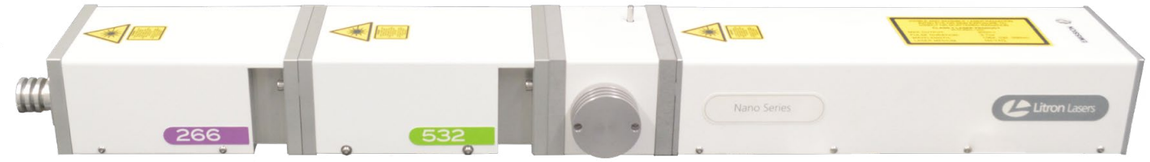
At the heart of all lasers in the Nano series is a robust monolithic resonator machined from a solid piece of aluminium for a solid and stable build platform. Ultra-stable mirror mounts, a stainless steel pumping chamber with close-coupled ceramic reflectors and proprietary long-life flashlamps ensure homogeneous, stable outputs.

Nano Series Models

Nano S/SG
Small, rugged, reliable and efficient. Conventional stable/super-Gaussian coupled resonator with electronically verified intra-cavity safety shutter.
Repetition rate: up to 100Hz.
Energy: up to 150mJ at 10Hz.

Nano L/LG
Rigid, stable construction through elegant design lends itself to use in demanding industrial applications.
Repetition rate: up to 100Hz.
Energy: up to 340mJ at 10Hz.

Nano T
As the Nano L, but with a stable-telescopic resonator for very low beam divergence and excellent uniformity.
Repetition rate: up to 50Hz.
Energy: up to 290mJ at 10Hz.



Nano S laser with motorised attenuator, output at 266nm

Ultra-compact Pulsed DPSS Q-switched Nd:YAG lasers

Pulse energy up to 130mJ at 1064nm, repetition rates up to 300Hz

Available with all harmonics to 213nm

nano DPSS

FEATURES

- ***Output energies up to 130mJ***
- ***Repetition rates up to 300Hz***
- ***Ultra high stability***
- ***2nd, 3rd, 4th and 5th harmonics available***
- ***Motorised attenuator***
- ***Interlocked electrical safety shutter***
- ***Stable, stable-telescopic and super-Gaussian coupled resonator options***
- ***TEM_{00} option***
- ***Compact and rugged***
- ***Field replaceable diodes***
- ***Compact PSU and detachable chiller***
- ***Diode life 4 billion pulses***

The **Nano DPSS series** comprises a set of pulsed fully diode pumped Q-switched Nd:YAG lasers with output energies up to 130mJ and repetition rates of up to 300Hz.
A fully sealed laser head and harmonics provide complete protection from external contamination.

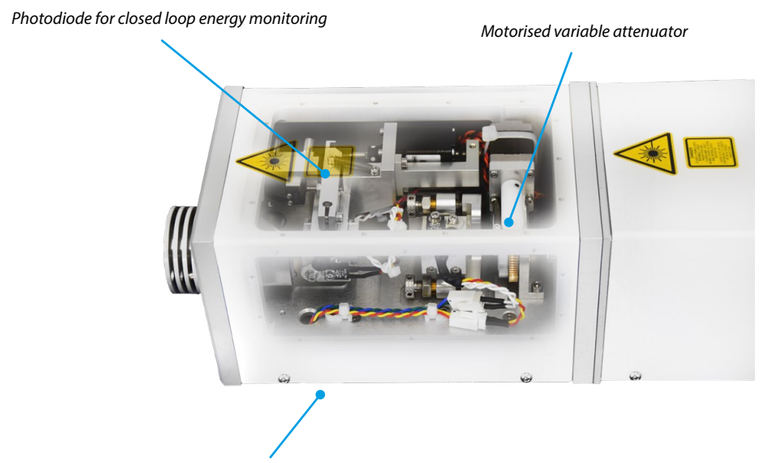
The harmonic module contains an integrated attenuator for precise control over the pulse energy.

All harmonics are automatically angle-tuned with high precision linear actuators, making Litron's unique motorised angle-tuning much faster than traditional thermal tuning.

This feature has the option of single, on-demand tuning or continuous automatic tracking of the crystals for guaranteed long-term stability. Additionally, harmonic generation crystals are thermally stabilised to better than 0.1°C.

APPLICATIONS

- ***Spectroscopy & LIBS***
- ***LIF & ESPI***
- ***LiDAR & Remote sensing***
- ***LIDT***
- ***Laser Induced Forward Transfer LIFT***
- ***Laser flash photolysis***
- ***Laser ultrasonic testing***
- ***Microscopy***
- ***Ablation***



Compact High Energy Pulsed Nd:YAG Lasers

Flashlamp or fully diode pumped with a large range of modular intelligent accessories

Available with all harmonics to 213nm

TRLi
TRLi DPSS

APPLICATIONS

- ***Si wafer inspection***
- ***LCD repair***
- ***LiDAR & Remote Sensing***
- ***LIDT***
- ***LIFT***
- ***Ti:Sa, OPO, dye laser pumping***
- ***Laser cleaning***
- ***LIBS & LIF***
- ***Spectroscopy***

The **TRLi series** encompasses a fully birefringence compensated twin-rod pulsed resonator design which ensures a uniform beam profile at 1064nm. This, in turn, leads to exceptional beam homogeneity at 532nm and especially at 355nm and 266nm even at high average power outputs.

Resonator options include super-Gaussian coupled, stable and stable-telescopic configurations.

Bolt-and-play interchangeable harmonic modules can be added and removed as required. The intelligent system controller automatically adapts to the set configuration and allows seamless control in any setup or application.

All harmonics are angle tuned with high precision linear actuators. Litron's unique motorised angle-tuning is many times faster than traditional thermal tuning. This feature has the option of single, on-demand tuning or continuous tracking of the crystals for guaranteed long-term stability. All harmonic generation crystals are thermally stabilised to better than 0.1°C.

Sealed against the ingress of moisture and dust, the TRLi series provides unrivalled flexibility both in laboratory research and for industrial applications.

TRLi

FEATURES

- ***Output energies up to 850mJ***
- ***Repetition rates up to 200Hz***
- ***Flashlamp pumped***
- ***Motorised auto-stabilisation***
- ***Rugged industrial design***
- ***LUCi touchscreen control***
- ***Beam expanding telescopic module***
- ***OPO module***
- ***Injection seeding***

TRLi DPSS

FEATURES

- ***Output energies up to 360mJ***
- ***Repetition rates up to 300Hz***
- ***Fully diode pumped***
- ***Ultra-stable output***
- ***RMS stability <0.2% at 1064nm***
- ***Diode life 4 billion pulses***
- ***Field replaceable diodes***
- ***Smooth, homogenous beam profile***
- ***Compact PSU and detachable chiller***
- ***Diode pointer***

Pulsed Diode Pumped Nd:YAG Lasers

Pulse energy up to 1J at 1064nm, repetition rates up to 200Hz

Available with all harmonics to 213nm

PLASMA

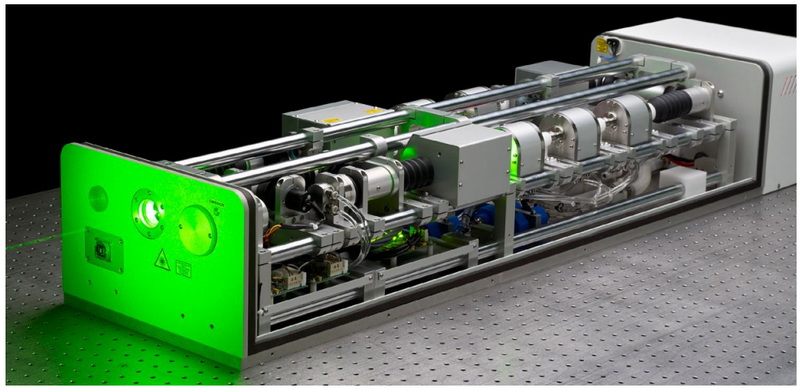
FEATURES

- ***Output energies up to 1J***
- ***Repetition rates up to 200Hz***
- ***Fully diode pumped***
- ***RMS stability <0.2% at 1064nm***
- ***Diode life 4 billion pulses***
- ***Smooth, homogenous beam profile***
- ***Compact PSU and detachable chiller***
- ***Field replaceable diodes***
- ***Choice of resonator***

PLASMA+

FEATURES

- ***Output energies up to 5J***
- ***All features as above for Plasma***

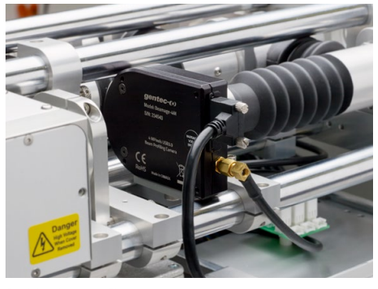


Plasma laser systems use the very latest technology to replace traditional flashlamp pumping. Litron's unique diode module design and diode drive electronics combined with the mechanically stable and rigid optical rail systems, deliver class-leading pulse to pulse stability (0.2% RMS at 1064nm).

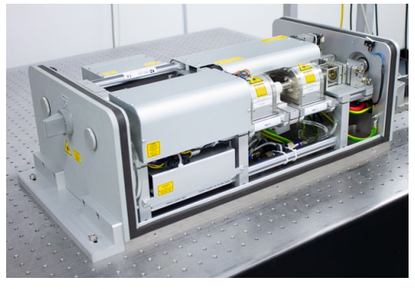
LUCi Controller

Using diode pumping provides a significant increase in pumping efficiency. This, in turn, reduces the laser heat management requirements, allowing a very compact, Litron-designed chiller to cool even the most powerful Plasma models. With only a single phase electrical supply, the Plasma series are stand-alone, turn-key systems equally suited to continuous operation in industrial processes and high up-time scientific research applications, such as Ti:Sa pumping.

The Plasma series options include motorised auto-tuning and auto-tracking of the harmonics modules. Litron has developed industrially proven, hands-free tuning to obtain the maximum energy output from a given harmonic module in <20 seconds. The auto-tracking function significantly reduces long term energy drift, often observed at UV wavelengths.



Real time beam profile monitoring option



Compact Plasma G 400-100

High Energy Pulsed DPSS Nd:YAG Lasers

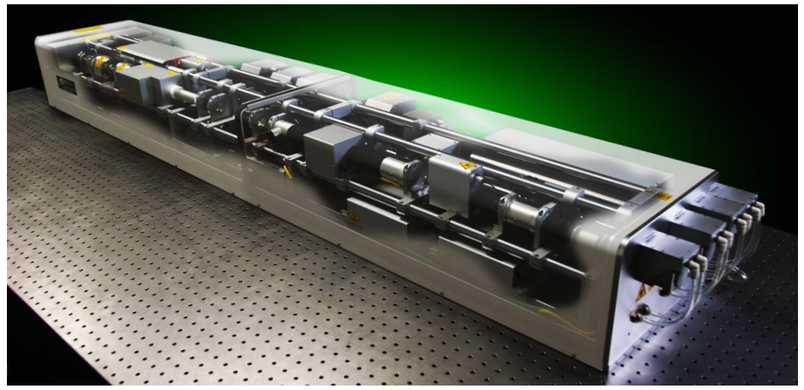
Pulse energy up to 5J, repetition rates up to 200Hz

APPLICATIONS

- ***Semiconductor annealing***
- ***Thomson Scattering***
- ***Spectroscopy & LIBS***
- ***LiDAR & Remote sensing***
- ***Ti:Sa, OPO & dye laser pumping***
- ***Military & Defence***
- ***Laser Shock Peening***
- ***Laser Lift Off***
- ***LIDT***
- ***Plasma physics***

SYSTEM OPTIONS

- ***High energy version up to 5J***
- ***Motorised optical attenuator***
- ***Auto-tuning harmonics at 532nm, 355nm, 266nm and 213nm***
- ***Real time beam profile or pointing stability monitoring***
- ***Real time energy monitoring***
- ***Compact version***
- ***Up to 100mJ TEM_{00}***
- ***Injection seeding***
- ***Tunable OPOs and extended range UV diode pointer***



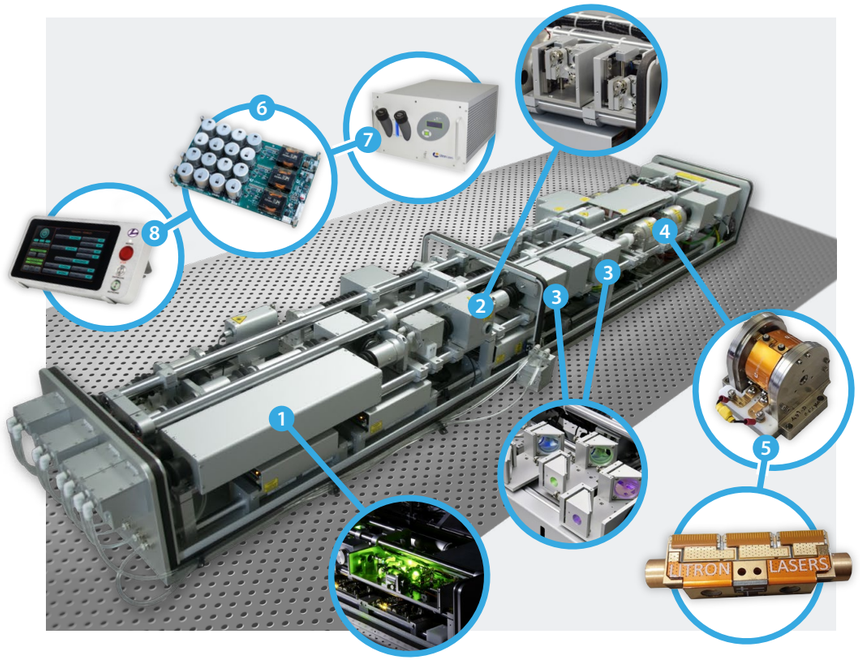
High energy diode pumped nanosecond lasers combined with high repetition rates are sought for an ever growing range of new applications. Very high stability and robust specifications are required, with easy maintenance to ensure minimal downtime as well as customisation with the ability to incorporate an extensive range of options.

Customisation

Constructing the Plasma+ on an industrial grade Invar-rail design offers many advantages over conventional base-plate solid state laser designs. Most notably Invar provides excellent mechanical and thermal stability, which is critical to ensure constant and reliable alignment. Moreover, the rail-based modular design allows for complete customisation to fit each user's exacting requirements.

PLASMA UNCOVERED

1. OPO
2. Automated beam switching
3. Motorised harmonics
4. Pumping chambers
5. Pump diodes
6. PSU electronics
7. Chiller
8. GUI controller

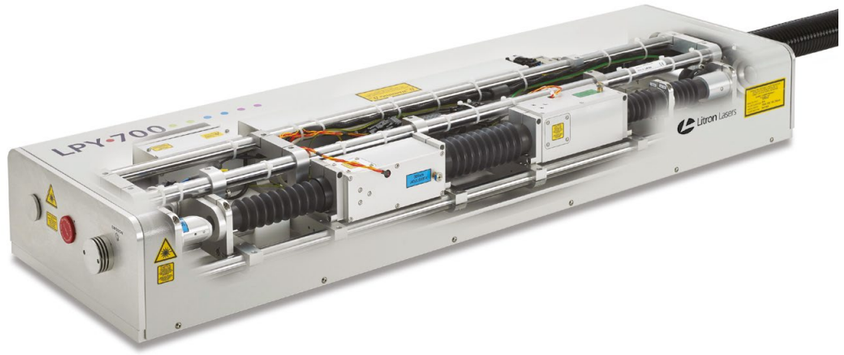


High Energy Pulsed Nd:YAG Lasers

Output energy up to 3.5J at 1064nm

High performance with fully integrated customisation

LPY•600
LPY•700
LPY•7000



FEATURES

- ***Rugged industrial build***
- ***Up to 3.5J at 1064nm***
- ***Repetition rates up to 200Hz***
- ***Choice of resonator options***
- ***2nd, 3rd, 4th and 5th harmonics***
- ***Full RS232 software control***
- ***Fully integrated power supply and water cooler***

APPLICATIONS

- ***Ti:Sa, OPO & dye laser pumping***
- ***Spectroscopy & LIBS***
- ***Holography***
- ***LIDT***
- ***LiDAR & Remote sensing***
- ***Thomson Scattering***
- ***Plasma physics***
- ***PIV***
- ***Laser Shock Peening***

LUCi touchscreen controller

Rugged, Invar-stabilised, pulsed Nd:YAG lasers with high energy and high performance for industrial and scientific applications.

The **LPY series** of pulsed lasers have been designed to suit almost any industrial or research application for a high energy or high specification Nd:YAG laser.

Based around a fully self-supporting Invar rail, the LPY series provides both exceptional mechanical and thermal stability. A 'no-compromise' design approach is evidenced in the build quality, a parameter that sets these lasers well apart from any of their competitors. The rail design allows a wide variety of resonator configurations to be offered, from single rod oscillators to fully birefringence compensating twin-rod oscillator, twin-rod amplifier systems.

To specify a system that is perfectly matched to application requirements LPY lasers can be configured as a stable resonator, a stable-telescopic resonator offering a low order multimode output with a smooth spatial and temporal profile, or as a super-Gaussian coupled resonator offering a low M^2 single transverse mode output with slightly higher peak powers or as a true TEM_{00} resonator with an M^2 <1.2.

The **LPY 7000** lasers offer high energy Q-switched outputs up to 3.5J and repetition rates of up to 50Hz.

Motorised harmonic separation and switching allows remote selection of output wavelengths. When used in unison

with the motorised harmonic generation and motorised mirror stages, each configurable wavelength can be selected and optimised remotely at the push of a button.

All LPY harmonics are available with optional auto-tuning, such that the LPY system will automatically peak the output energy at startup or on request. In addition, auto-tracking provides continuous feedback from an integrated photodiode to maintain the maximum output energy during operation.

Flashlamp change is performed in a matter of minutes with no requirement for any re-alignment. An IP54 sealed case ensures that the laser is protected against the ingress of dirt and moisture when used in industrial environments.

OPTIONS AND ACCESSORIES

- ***Full system monitoring***
- ***Remote automation and ease of integration***
- ***Motorised harmonic generation stages***
- ***Motorised harmonic separation and switching***
- ***Integrated Type II BBO OPO***
- ***Injection seeder***
- ***Line narrowing etalons***
- ***Variable optical attenuator***
- ***Integrated energy monitor and closed-loop stabilisation***
- ***Inline beam profiling***
- ***Options for systems integrators***

800mJ, 355nm injection-seeded

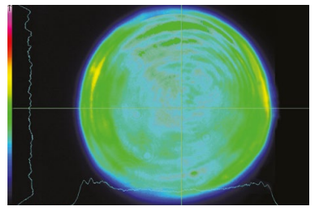
LPY•10J

Ultra High Energy Pulsed Nd:YAG Lasers

Output energy up to 10J

FEATURES

- ***Up to 10J at 1064nm***
- ***Up to 5J at 532nm***
- ***Repetition rates 1-5Hz***
- ***Telescopic or super-Gaussian coupled resonators***
- ***Birefringence compensation***
- ***Rugged industrial build***
- ***Optional seeder package***
- ***2nd, 3rd and 4th harmonics***
- ***Full RS232 software control***

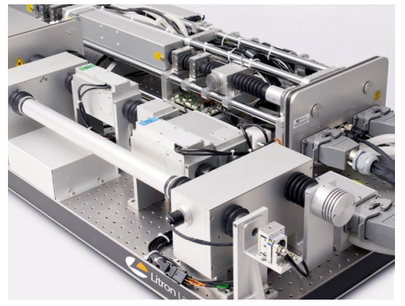


Super-Gaussian beam profile 5J, 532nm, 5Hz

10J output stage

The **LPY10J** laser systems offer Q-switched output energies of 10J at 1064nm from a proven design platform. The self-supporting Invar frame has been utilised for many years in industrial and scientific applications where robustness and stability are paramount.

In addition to the standard configuration, there are many options available: injection seeding for narrow linewidth; harmonic generation units to provide outputs up to the 4th harmonic; automated wavelength selection; energy monitoring and automatic output peaking and continuous tracking.

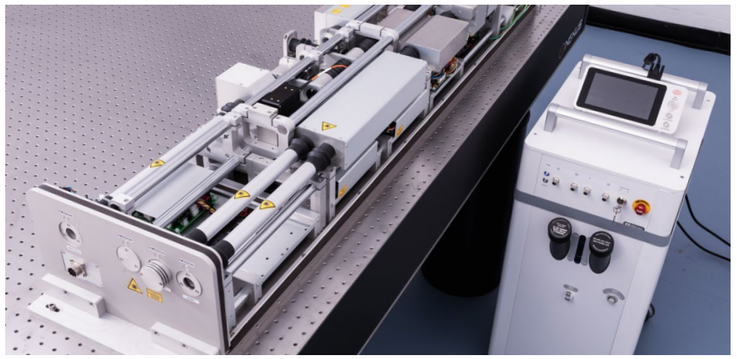


LPY10J laser system showing 2nd and 3rd harmonic stages

Tunable Pulsed Lasers

Fully integrated Nd:YAG OPO systems with DPSS or flashlamp pump source

Aurora II INTEGRA



FEATURES

- ***Fully integrated Q-switched pump laser and OPO***
- ***Continuous tuning range of 410–2600nm***
- ***Pulse energies up to 45mJ***
- ***< 4cm^{-1} linewidth in the visible range***
- ***< 4% RMS stability in the visible range***
- ***Repetition rates from 1 to 200Hz***
- ***Motorised OPO wavelength tuning***
- ***Simultaneous signal and idler access***
- ***355nm pump process shutter and energy monitoring***
- ***No user-alignment required***
- ***Full PC control or LUCi controller***

SYSTEM OPTIONS

- ***UV harmonic option for 210–410nm***
- ***Spectrometer for wavelength measurement and automatic tuning***
- ***OPO variable optical attenuator***
- ***Direct access to 1064nm and 532nm via side ports***
- ***Direct access to 355nm pump output via front panel***
- ***Variable repetition rates***
- ***532nm pumping for high energy 670–2600nm operation***

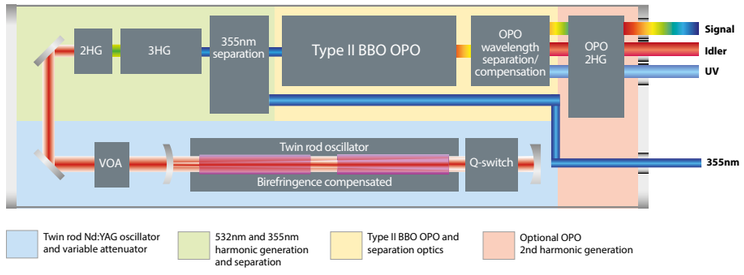
Aurora II Integra 355 OPO

The **Aurora II Integra series** combines a Type II BBO broadband OPO and Nd:YAG nanosecond pump source into a single laser head, using an ultra-rigid Invar optical rail to provide class-leading performance and stability. True no-gap tunable output from 410nm to 2600nm with options to extend into the UV range (210-410nm) as well as direct access to the pump laser and its harmonics make the Aurora II the perfect choice for a wide range of research and industrial applications.

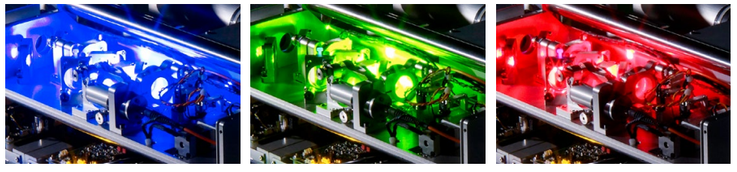
The integrated fully-motorised design eliminates the need for user alignment and adjustment even when relocating the laser head.

With a choice of pump sources from Litron's wide range of Nd:YAG lasers, a highly modular layout and even bespoke component optimisation, tailoring the Aurora II into a flexible, customised solution has never been easier.

Aurora II Type II BBO OPO Unit Schematic view



Schematic shows the compact arrangement of the combined pump laser and Aurora II 355 OPO in a single housing.



APPLICATIONS

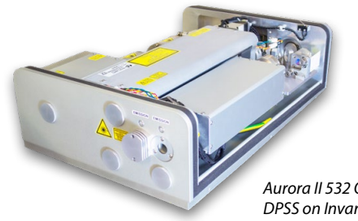
- ***Photoacoustic imaging***
- ***High resolution spectroscopy***
- ***LiDAR & Remote sensing***
- ***LIDT***
- ***Si wafer inspection***
- ***Laser-induced fluorescence***
- ***Non-linear spectroscopy***
- ***Combustion research***
- ***Photobiology***
- ***Process monitoring***
- ***Display manufacture and testing***

Aurora II 532 OPO, a 532nm-pumped compact laser system

The **Aurora II 532 OPO** combines 532nm pump generation, variable attenuator and Type II BBO OPO resonator, into a single compact module that can be attached to any of Litron's TRLi series of flashlamp or DPSS Nd:YAG lasers to provide tunable no-gap output in the 670 to 2600nm range. Incorporating design features used throughout Litron's Aurora OPOs, the TRLi module provides high stability, narrow linewidth and simultaneous signal and idler output in a self-contained unit that is interchangeable with the harmonic units within the TRLi range. With little to no realignment required on reattachment, the TRLi OPO expands the output of these high energy compact lasers into the NIR range without losing the flexibility of accessing the Nd:YAG harmonics.

Aurora II 532 OPO DPSS or flashlamp-pumped

Also available as a diode pumped version on an Invar rail, this compact OPO is ideal for integration in applications requiring a small footprint, high pulse repetition rates with exceptional robustness and stability.



Aurora II 532 OPO DPSS on Invar

1.57µm

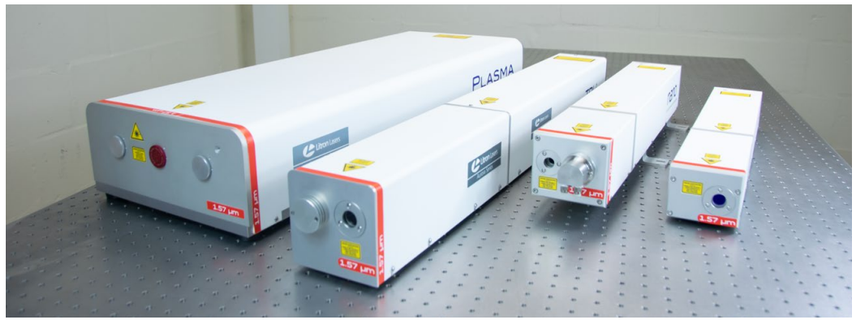
Fixed wavelength OPO with pulsed DPSS* or flashlamp pumped Nd:YAG Laser

FEATURES*

- ***Energy up to 50mJ at 200Hz***
- ***Energy up to 60mJ at 100Hz***
- ***10ns pulse duration***
- ***Variable repetition rate from 10 to 200Hz***
- ***Ultra compact PSU and cooler***
- ***Homogenous beam profile***
- ***Intuitive operation using the LUCi touch screen control interface***

APPLICATIONS

- ***LiDAR***
- ***Remote sensing***
- ***Military & Defence***
- ***Spectroscopy & LIBS***



Aurora 1.57 – Fixed wavelength OPO optimised for 1.57µm operation

For IR applications in LiDAR and spectroscopy the **Aurora 1.57 series** is a dedicated all-in-one sealed OPO for use in more extreme environments. Providing eye-safe 1.57µm output, the 1064nm pump laser and OPO are mounted in a single compact housing ensuring permanent alignment between the two components. The 1.57µm OPO can be integrated with most of Litron's pulsed laser systems.

Pulsed Nd:YAG Lasers for PIV

The world's most comprehensive range of PIV lasers from a single manufacturer

FEATURES

- ***Outputs of up to 425mJ per laser head at 532nm***
- ***Standard motorised attenuator***
- ***Repetition rates of up to 300Hz***
- ***Homogeneous beams***
- ***Fully independently triggered***

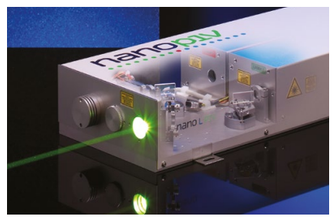
All of Litron's PIV laser systems are dual head devices, meaning that the PIV system contains two totally independent lasers.

The range of PIV systems is based around the compact Nano series, TRL series, and the Invar-stabilised LPY series.

The overriding factor that sets Litron's products apart is quality. This is evidenced not only in the design and construction of the product, but also in their performance. In any imaging application the beam quality is of paramount importance as this completely determines the light sheet quality.

By choosing a suitable resonator configuration the output beam quality can be controlled to give a very smooth spatial profile, which remains homogeneous as it propagates into the far field.

It is our philosophy to provide a laser system that suits an application. A 'one system fits all' approach, as offered by most manufacturers, does not allow the customer to optimise their process. For applications such as PIV, Litron has developed resonators that will yield extremely uniform light sheets whose pulse-to-pulse structure and stability remains constant. These are based around our stable or stable-telescopic resonators.



Nano Series Models

Nano S PIV
The smallest in the series, comprising two Nano S laser heads mounted onto an aluminium gauge plate to provide robustness. Beam combination optics and any harmonic generation units are mounted onto this plate for increased stability. Both lasers share the same integral LPU450 power supply and cooling unit.

Nano L PIV
Exceptional industrial robustness. The Nano L laser can be run at 100Hz enabling results to be taken at 200Hz. Industry-leading specifications are achieved from a very compact laser head.

Nano T PIV
Like Nano L but with telescopic resonators for low divergence and low M^2 enabling light sheets up to four times thinner or longer than most other PIV laser systems.

TRL and LPY Models

TRL PIV
High energies from a compact package. Dual head high energy laser systems with output energies up to 425mJ at 532nm per laser head. Also uses the low M^2 stable telescopic resonator for thin, large area light sheets.

LPY PIV
Invar stabilised PIV lasers for high average power PIV and other double-pulse applications. Twin-rod birefringence compensation is used for stability and beam homogeneity.

Power supplies for the range include state-of-the-art IGBT switching into the flashlamp, giving increased efficiency and stability and significantly prolonging lamp life due to the much lower currents required.

High Repetition Rate Lasers for PIV

Diode pumped Nd:YLF and Nd:YAG lasers for time-resolved PIV applications

LD•PIV

FEATURES

- ***High energy at 527nm at 1kHz***
- ***Output energies up to 30mJ***
- ***Rugged industrial design***
- ***0.2-20kHz repetition rate***
- ***RS232 control with full software support***

The **LD-527 PIV series** lasers are diode pumped, intra-cavity doubled, dual-cavity, Nd:YLF laser systems ideally suited to imaging applications such as PIV and pump applications. Output energies of up to 30mJ, 527nm per cavity at 1kHz are available.

The lasers are built around a rugged self-supporting Invar rail that bestows excellent mechanical and optical stability. This, coupled with the proprietary resonator design, leads to excellent output beams that are spatially and temporally extremely smooth and stable, giving rise to light sheets that offer almost identical shot to shot illumination.

The system can be controlled either by the in-built LCD interface or via RS232 with the supplied software suite or dll. External triggering of the lasers is accessible via a TTL interface.

The LD-527 PIV lasers incorporate Litron's established and field-proven diode pump module. This state-of-the-art module gives high homogeneity rod pumping, which, in turn, leads to a highly stable, uniform output.

PLASMA PIV

FEATURES

- ***0-200Hz operation***
- ***M^2 <10***
- ***Fully diode pumped***
- ***Long diode life***
- ***Fully independent laser operation and timing***
- ***Smooth homogeneous profile***
- ***Optimised for high brightness light-sheets***
- ***Compact PSU and detachable chiller***

The DPSS **Plasma PIV** system is a dual-resonator, pulsed, diode-pumped laser designed specifically for PIV applications. The Plasma PIV comprises two fully independent extra-cavity frequency-doubled, pulsed Q-switched Nd:YAG DPSS lasers that are beam combined to a common beam axis. Pulsed-diode pumping provides an unprecedented level of flexibility not available previously in PIV lasers.

With an output of 75mJ per pulse up to 150Hz and 60mJ at 200Hz and with pulse widths of <10ns, it is suited to a wide range of cameras and PIV setups.

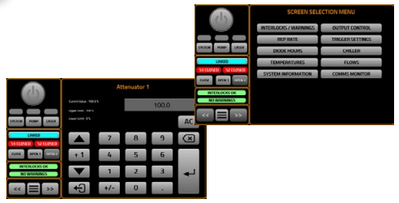
With minimal maintenance requirements and few consumable parts, the Plasma offers high uptime, low cost of ownership and outstanding performance.

Ultra rugged pulsed Nd:YAG lasers for PIV & LIBS

Vibration and shock proof

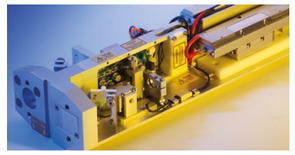
b e r n o u l l i
p i v

LUCi Controller

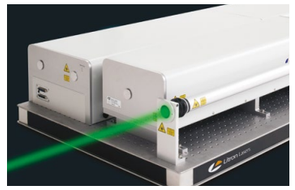


The **Bernoulli PIV** is a fully integrated, fully sealed, shock and vibration proof PIV laser system. Machined from solid aluminium and sealed to IP65, the laser head is built for demanding applications where the environment would naturally preclude the use of many standard systems. Incorporating two fully independent laser heads the Bernoulli gives output energies of up to 200mJ at 532nm and repetition rates of up to 100Hz. Powered by a compact, fully integrated power supply and cooler unit, and controlled via the LUCi touchscreen, the Bernoulli is both simple and intuitive to use. Industry standard mounting for light sheet optics is standard, as is a full suite of trigger and synchronisation inputs for absolute control of the laser output. Standard accessories such as a motorised attenuator and PC software suite make the Bernoulli the most fully featured system of its type available.

Bernoulli LIBS - 1064nm low divergence version of Bernoulli is available, suitable for double pulsed LIBS. The Bernoulli LIBS contains two laser oscillators that are combined on to a single beam axis in a single head. The lasers are fitted with low divergence optics to ensure high focusability and make it highly suited to LIBS applications that utilise the double pulse technique. The pulses can be used to reheat the plasma or as cleaning pulses.



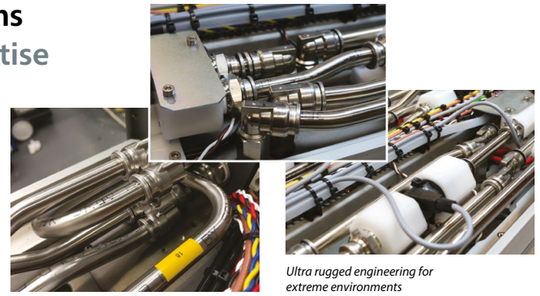
Compact custom laser head



Custom 10J Q-switched laser

Custom Laser Systems

Flexibility and expertise



Ultra rugged engineering for extreme environments

Litron's flexible approach and expertise in laser design means custom lasers are a natural part of our production output.

In addition to its standard range, Litron produces a great variety of custom systems, either based on standard modules or, where necessary, a complete bespoke design to fit your specific needs.

The high degree of both mechanical and electrical modularity inherent in the design of Litron's lasers, yields a platform ideally suited to non-standard or bespoke systems.

The Invar rail structure and associated optical and mechanical mounts form a set of components whose placement within the rail are largely variable. Almost any optical configuration can be achieved with absolutely standard components. This is a significant advantage when adapting an existing design to a specific requirement or when producing an entirely new type of custom laser system.

Applications

Litron's lasers are suitable for many scientific and industrial applications including:

PIV & Visualisation
Particle image velocimetry
Time resolved PIV
PLIF
Laser induced fluorescence
Holography
ESPI
Photoacoustic imaging

LCD & Semiconductor
LCD/OLED repair
Laser lift-off
Silicon annealing
Rapid thermal processing
Cleaning
Photovoltaic processing
Laser drilling
Silicon wafer inspection

Remote Sensing
LiDAR
Environmental monitoring
Atmospheric research
Military and Defence

Laser Pump Sources
Ti:Sapphire pumping
OPO pumping
Dye laser pumping
OPCPA

Scientific Research
Particle physics
Photochemistry
Nonlinear optics
Plasma physics
Flash photolysis
EUV generation
Combustion research
Thomson scattering
Fusion technology

Spectroscopy & LIBS
LIBS
ICP-MS
MALDI-TOF
Coherent anti-Stokes Raman
Raman scattering
High resolution spectroscopy
Molecular spectroscopy

Surface Processing
Laser shock peening
De-flashing
Pulsed laser deposition
Laser-induced forward transfer
Laser cleaning
LIDT testing
Laser marking
Annealing
Ablation

If you are looking for a laser system to fit your specific needs, contact Litron Lasers today to find out about our bespoke designs.

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.

CE UK CA

ACT
ISO 9001 : 2015
ISO 14001 : 2015
UKAS MANAGEMENT SYSTEMS
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