

Litron Total Laser Capability

LIBS

Spectroscopy

LIDAR

Remote Sensing

PIV

Photochemistry

LIF

Nonlinear Optics

Ti:S Pumping

Particle Sizing

Flow Monitoring

OPO Pumping

Dye Laser Pumping

Ablation

Deflashing

Laser Marking

Mask Repair

Engraving

Stent/Stencil Cutting

Hole Drilling

Micromachining

Materials Processing

Silicon Dicing



COMPACT PULSED Nd:YAG LASER SYSTEMS



Nano Series

Ultra compact design.
Monolithic laser resonator.
Conventional stable, graded
reflectivity unstable and
telescopic stable resonators
available.
Energy up to 900mj.
Repetition rates up to 200Hz.
Rugged mechanical and
optical design.



Turn-key
operation RS232
interface.
Full range of
harmonic
generation
assemblies.

Large range of
accessories. Universal input
voltage 90-260VAC.

Nano S - Small, rugged,
reliable and efficient.
Conventional stable
resonator with electronically
verified intra-cavity safety
shutter. Available as TEM₀₀
by the inclusion of an intra
cavity aperture.
Repetition rate: up to 100Hz.
Energy: up to 130mj at 10Hz.

Nano L - Rigid, stable
construction through
elegant design lends
itself to use in
demanding industrial
applications.
Repetition rate: up to 100Hz.
Energy: up to 320mj at 10Hz.

Nano T - As the Nano L but
with telescopic stable resonator
for very low beam divergence
and excellent uniformity.
Repetition rate: up to 50Hz.
Energy: up to 320mj at 10Hz.



Nano TRL - Twin rod oscillator
with birefringence
compensation for excellent
beam quality. Extra rugged
industrial design.

Repetition rate: up to 200Hz.
Energy: up to 900mj at 10Hz.

Nano O - Smallest head in the
range, designed specifically for
incorporation into
customers' equipment.
Fully air cooled
option available
where water is not
desired such as

portable LIBS applications.
Repetition rate: up to 100Hz.
Energy: up to 130mj at 10Hz.

HIGH POWER PULSED Nd:YAG LASER SYSTEMS

LPY 600/700 series

Invar stabilised resonator.
Modular construction for
economical custom design.
Gaussian coupled or telescopic
resonator. RS232 interface.
Full TTL control. Energies up
to 2J. Repetition rate up to
200Hz. Birefringence
compensation as standard on
LPY700 series.

LPY600 Series -

Economical, robust and efficient
range of single rod oscillators
and oscillator/amplifiers. An
excellent scientific system at
an economical price.

LPY700 Series - Twin rod
oscillator laser for higher
energies and full birefringence
compensation for superior
beam quality.





PIV LASER SERIES



Twin head design.
Ultra compact Nano PIV series.
Energy up to 1J.
Repetition rate up to 200Hz.
Twin wavelength option
(532nm and 355nm or
266nm). Dual LIBS/PIV
configuration. Custom
configurations available.



Nano S PIV - The smallest in the series. Two Nano S lasers 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 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. Exceptional specification is achieved from a very compact laser head.

Nano T PIV - Like Nano L but with telescopic resonators for low divergence, enabling light sheets up to four times thinner or longer than most other systems.

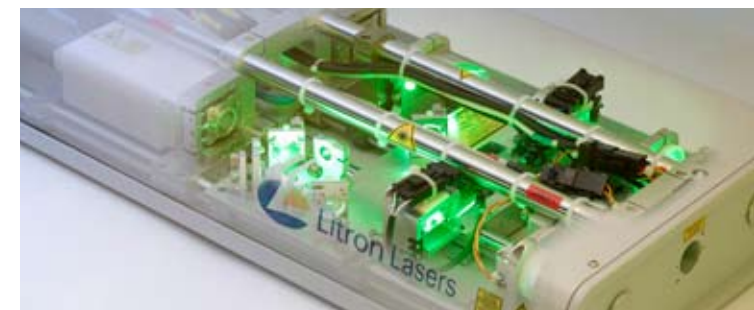
LPY PIV - Invar stabilized PIV lasers for high average power PIV and other double pulse applications. Twin rod birefringence compensation provided for stability and beam homogeneity.
Up to 800mj at 15Hz and 50mj at 200Hz

LDY300-PIV - High energy. 0-10kHz Continuously variable dual cavity system. 10-20mj @ 527nm per head per pulse. Field replaceable diodes.

PULSED Nd:YLF DIODE PUMPED SYSTEMS

LDY300 series - State-of-the-art, high repetition rate lasers. Rugged, industrial design 10, 20 or 30mj at 527nm, 1kHz.

Field replaceable diodes. Control via LCD interface and supplied software suite. Power supply and integrated chiller in a compact rackmounted unit.





PULSED WELDER AND LASER CUTTING SERIES

LPY800 Series

Frequencies of 1-10kHz and pulse energies of up to 50mJ. Completely variable pulse length ideal for welding applications.

GLASS LASERS

Can be made to special order.



LAMP PUMPED CW Nd:YAG LASERS

Rugged industrial design
High performance Invar stabilised rail for maximum stability.
Diffuse ceramic reflectors.
Easy lamp change without need for re-alignment.
Full RS232 and TTL controls.

LCY20 TEM₀₀ - Compact laser head where space is a premium.
Power: up to 20W TEM₀₀.

LCY35/45 Series - Available as multimode, TEM₀₀ or as multimode and TEM₀₀. All variations available with or without Q-switch.
Power: up to 35W/45W MM and 6W TEM₀₀.

CUSTOM SYSTEMS

LCY70/90/100 Series -

The most advanced range of lamp pumped, continuous wave laser sources available today.

Pure CW output, Q-switched. CW output and optional TEM₀₀ versions.
Power: up to 90W MM and 18W TEM₀₀.

LDY SERIES CW DIODE PUMPED LASERS

Sealed, rugged industrial design. Q-switched up to 100kHz or true CW.
Up to 60W multimode or 16W TEM₀₀.
Compact single phase power supply and self contained cooling system.

In addition to its standard range, Litron produces a great variety of custom systems, both based on standard



modules and, where necessary, offers a complete design to fit your needs. Contact Litron to discuss your custom laser needs.

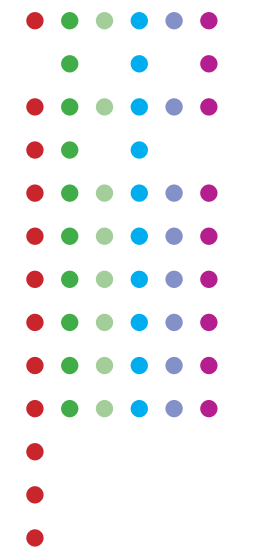
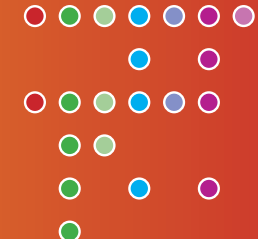
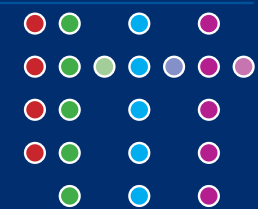
APPLICATION SELECTOR GUIDE

We have included this guide to help you quickly find the most appropriate Litron product to match your application.

If your application or exact requirement is not shown here please contact Litron, we will make every effort to find a solution to fit your needs.

LASER APPLICATION	LASER MODEL																		
	Nano 0	Nano S (G)	Nano L (G)	Nano T	Nano TRL	Nano TRL (G)	Nano S PIV	Nano L PIV	Nano T PIV	Nano TRL PIV	LPY 600 (G)	LPY700	LPY700 (G)	LPY 800	LPY PIV	LPY Welder	LDY Series	LDY 300 PIV	LCY Series
LIBS	○	○	○	○	○	○					○	○	○						
SPECTROSCOPY	○	○	○	○	○	○					○	○	○						
LIDAR	○	○	○	○	○	○					○	○	○						
REMOTE SENSING	○	○	○	○	○	○					○	○	○						
PIV							○	○	○	○				○			○		
PHOTOCHEMISTRY			○	○	○	○						○							
LIF	○	○	○	○	○	○	○	○	○	○	○	○		○		○	○		
NONLINEAR OPTICS		○	○			○						○	○		○		○		
Ti:S PUMPING				○	○	○					○	○	○			○	○		
PARTICLE SIZING		○	○	○	○	○						○							
FLOW MONITORING							○	○	○	○				○			○		
OPO PUMPING			○	○	○	○						○				○			
DYE LASER PUMPING				○	○						○	○	○						
ABLATION		○	○	○	○	○						○	○						
DEFLASHING						○						○							
MARKING																○		○	
MASK REPAIR	○	○																	
ENGRAVING																○		○	
HOLE DRILLING													○	○		○		○	
MICROMACHINING													○		○			○	
MATERIALS PROCESSING		○	○	○	○							○	○		○	○		○	
SILICON DICING																		○	
WELDING															○			○	
STENT/STENCIL CUTTING													○		○				

1064/1053nm
532nm
527nm
355nm
351nm
266nm
213nm



ENERGY MONITORING

Litron manufactures a comprehensive range of laser energy monitors. These are photodiode based instruments and allow extremely accurate analysis and measurement. Litron's range of monitors can measure every pulse from the laser system, rather than averaging the energy as many calorimetric devices do. This leads to unrivalled accuracy and flexibility of measurements. Typically the pulse to pulse repeatability is better than 0.2%.

All energy monitors feature a bright 4 digit display and an RS232 output, which allows data-logging of the laser performance. A comprehensive software suite is provided as standard.

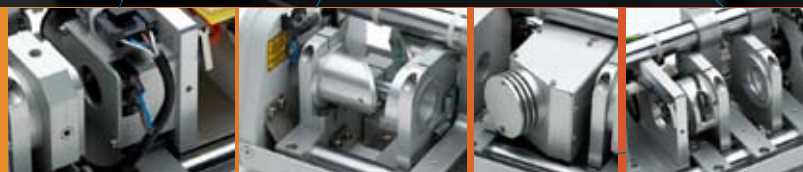


ACCESSORIES

Litron also offers a comprehensive range of accessories all built in-house to our own demanding specifications.

Some of the equipment available includes:

- Harmonics generators up to the fifth.
- Harmonic separation optics.
- Optical attenuators.
- Energy monitors.
- Optical components and mounts.
- Line narrowing accessories on certain models.
- Remote control software.
- Beam expanders.



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