

nanoTR1

High Energy Compact Pulsed Lasers for Research & Industry from Litron



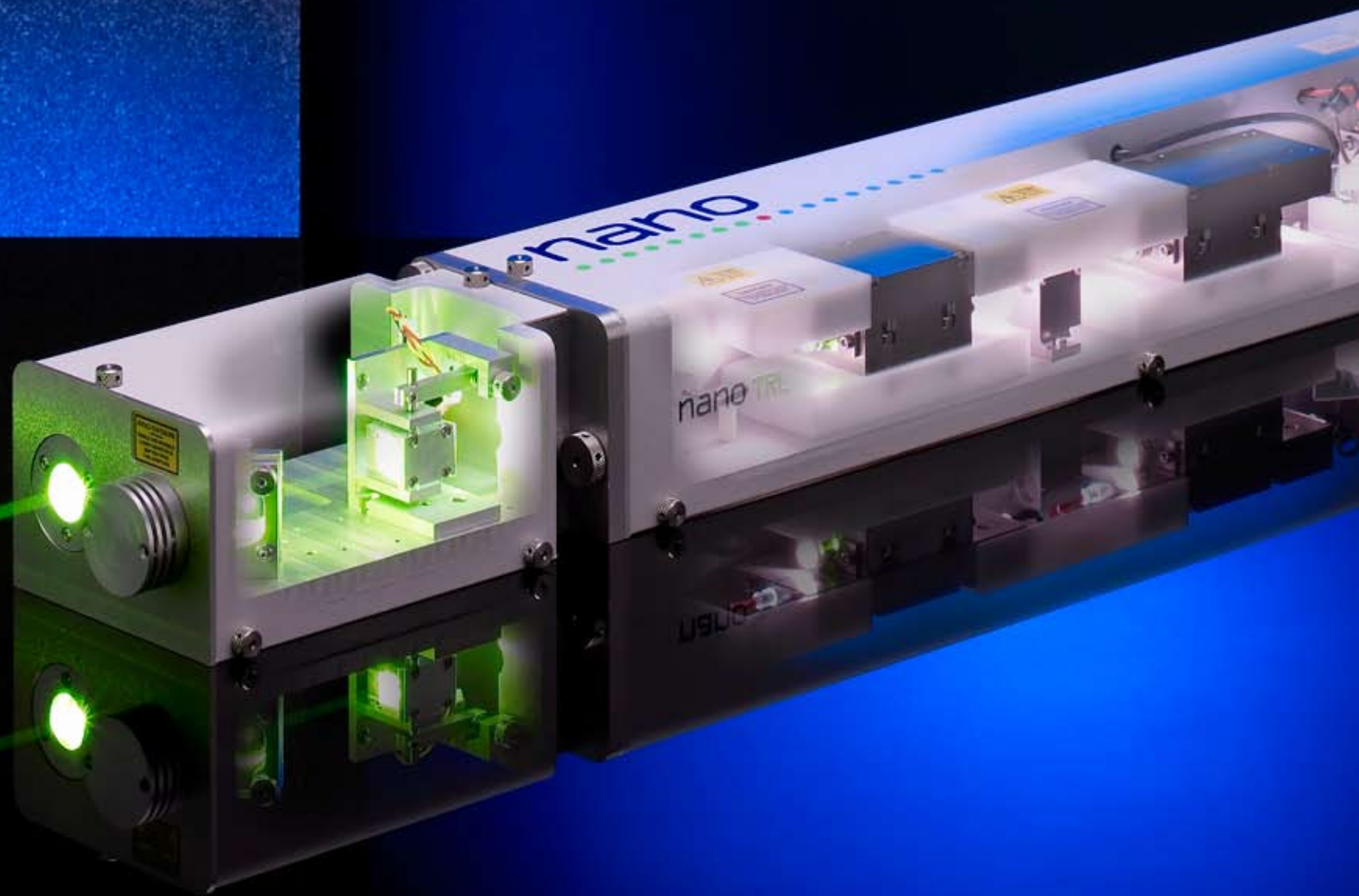
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 Litron Lasers

Litron Total Laser Capability

Nano TRL

The Nano TRL Series High Energy, High Repetition Rate, Nd:YAG Lasers



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 Litron Lasers

Built for Rugged Applications, Designed for High Energy Output



FEATURES

- Output Energies of up to 850mJ
- Repetition Rates of up to 200Hz
- Twin-rod Architecture for Birefringence Compensation
- Rugged Industrial Design

APPLICATIONS INCLUDE

- PIV
- OPO Pumping
- Ti:S Pumping
- Dye Laser Pumping
- Deflashing
- Cleaning
- Spectroscopy
- LIBS



Building on the success of the Nano series of compact pulsed Nd:YAG lasers, the Nano TRL is a fully birefringence compensated pulsed laser system offering both high energy and high repetition rate outputs. It's twin-rod architecture ensures high beam homogeneity even at very high average power outputs.

The Nano TRL is designed to suit demanding industrial applications with a sealed laser head machined from solid aluminium, ultra-stable mirror mounts and industry leading lamp lifetimes.

Resonator options include unstable Gaussian-coupled, stable and stable-telescopic configurations allowing for a multitude of applications.

Harmonic wavelengths are realised by 'bolt-on' modules that can be added and removed as required.

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

The Nano TRL Series Lamp Pumped Q-switched Nd:YAG Lasers

TECHNICAL DATA Nano TRL Gaussian-Coupled Resonators

Model	Nano TRL 850-10	Nano TRL 750-20	Nano TRL 650-30	Nano TRL 650-10	Nano TRL 600-20	Nano TRL 550-30	Nano TRL 420-10	Nano TRL 380-20	Nano TRL 350-30
Repetition Rate (Hz)	10	20	30	10	20	30	10	20	30
Output Energy (mJ)									
1064nm	850	750	650	650	600	550	420	380	350
532nm	425	375	325	325	300	275	210	190	175
355nm ⁽¹⁾	150	130	110	110	100	90	80	75	70
266nm	95	80	65	70	60	60	50	45	40
Parameter									
Stability(±%) ⁽¹⁾	2	2	2	2	2	2	2	2	2
Beam Diameter (mm)	9.5	9.5	9.5	8	8	8	6.35	6.35	6.35
Pulse Length (ns)	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7
Pointing Stability (μrad full angle)	50	50	50	50	50	50	50	50	50
M ²	~2	~2	~2	~2	~2	~2	~2	~2	~2
Divergence (mrad full angle)	0.5	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.7
Power Supply	LPU1000	19" Rack	19" Rack	LPU1000	19" Rack	19" Rack	LPU1000	LPU1000	LPU1000
Services									
Power Requirement (VAC)	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250	220-250
Cooling ⁽²⁾	Air	Water	Water	Air	Water	Water	Air	Air	Air

(1) At 1064nm

(2) Chiller option available to negate the need for water

The Nano TRL Series Lamp Pumped Q-switched Nd:YAG Lasers

TECHNICAL DATA Nano TRL High Repetition Rate Stable Resonators

Model	Nano TRL 320-50	Nano TRL 100-100	Nano TRL 250-100	Nano TRL 80-200	Nano TRL 120-200
Repetition Rate (Hz)	50	100	100	200	200
Output Energy (mj)					
1064nm	320	100	250	80	120
532nm	160	60	130	45	65
355nm	60	20	45	15	20
266nm	30	10	20	7	9
Parameter					
Stability(+/-%) ⁽¹⁾	2	2	2	2	2
Beam Diameter (mm)	6.35	5	6.35	5	6.35
Pulse Length (ns)	10-12	10-15	10-15	10-12	10-15
Pointing Stability (µrad full angle)	100	100	100	100	100
Power Supply	19" Rack	LPU1000	19" Rack	19" Rack	19" Rack
Services					
Power Requirement (VAC)	220-250	220-250	220-250	220-250	220-250
Cooling ⁽²⁾	Water	Air	Water	Water	Water

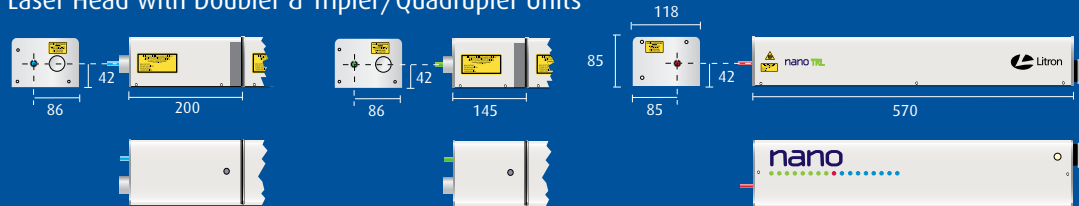
(1) At 1064nm

(2) Chiller option available to negate the need for water

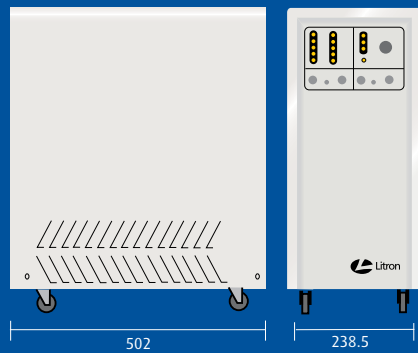
The Nano TRL Series Lamp Pumped Q-switched Nd:YAG Lasers

MECHANICAL DATA

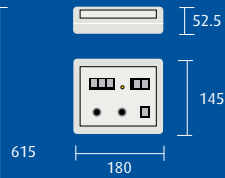
Laser Head with Doubler & Tripler/Quadrupler Units



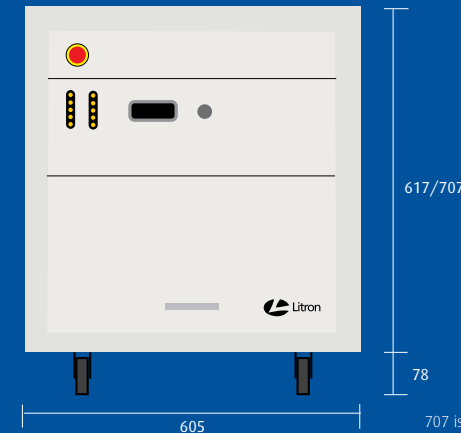
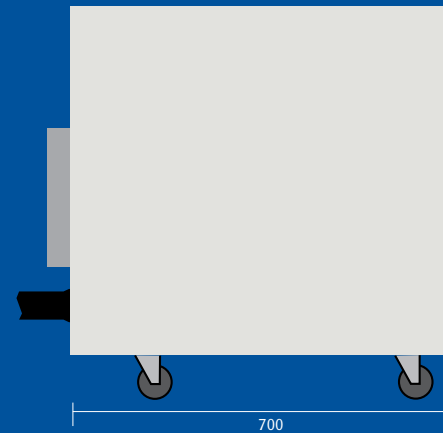
LPU1000 PSU



Remote Control Box



Rack-mount PSU



All dimensions shown in mm

707 is with chiller unit.
617 is with water to water cooler.



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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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