

NS-series MOPA Scheme Flashlamp Pumped Nd:YAG Q-switched Laser Systems with VRM Resonators



General Information

The series of high-energy systems based on VRM resonators. MOPA scheme provides with up to 850mJ output energy at fundamental wavelength keeping the beam quality close to TEM-00 ($M^2 \leq 2$).

All systems consist of a relatively compact laser head pumped by LPS-1000 unit equipped with touchscreen remote controller along with RS-485 / USB / Ethernet interfaces.

Detachable harmonics generators for 532, 355, 266 and 213 nm. Automatic wavelength switching option.

Applications

- LIDAR
- Ti:Sa / OPO / Dye Lasers Pumping
- LIBS / Spectroscopy
- LIDT
- LIF
- Material Ablation
- Laser Peening

Specifications⁽¹⁾

		NS-400-VRM	NS-450-VRM	NS-850-VRM
Repetition rate, Hz		20	10	
Pulse duration (FWHM), ns	1064 nm		≤10	
Pulse energy, mJ ⁽²⁾	1064 nm	400	450	850
	532 nm	200	230	430
	355 nm	80	90	210
	266 nm	40	50	100
Energy stability, %	1064 nm	±2		
Jitter, ns ⁽³⁾		±1.0		
Polarization		Linear		
Beam diameter (near field), mm		~6,5		~9
Beam profile		Near-TEM00 (Gaussian fit >70% in near field, >90% in far field)		
Beam divergence (full angle for 86% of energy), mrad		≤0.5		
Beam pointing stability, μrad		±40		
Laser head size (without harmonics modules), L x W x H, mm		575 x 125 x 107		
Power supply / cooling system model Size (D x W x H), mm / Weight, kg		LPS-1000, 459 x 462 x 281 / ~22		
Mains parameters		90...250 VAC, 50/60 Hz, single phase		
Operation temperature, °C		15...30, non-condensing conditions		

⁽¹⁾ Specifications are subject to change without notice due to continuous improve of products

⁽²⁾ Fifth harmonic generator parameters are available on request

⁽³⁾ With respect to external TTL triggering signal

Drawings

