

High-energy VRM based Flashlamp Pumped Nd:YAG Q-switched Laser Systems



General Information

The special series of high-energy systems based on VRM resonators. Two-stages amplification provides with up to 2J output energy at fundamental wavelength keeping the beam quality close to TEM-00 ($M^2 \leq 2$).

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

Detachable or embedded automatic harmonics generators up to fifth: 1064, 532, 355, 266 and 213 nm.

Applications

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

Specifications⁽¹⁾

		NS-1000-VRM	NS-1200-VRM	NS-1500-VRM	NS-2000-VRM
Repetition rate, Hz		10			5
Pulse duration (FWHM), ns	1064 nm	~10			
Pulse energy, mJ ⁽²⁾	1064 nm	1000	1200	1500	2000
	532 nm	500	650	820	1000
	355 nm	200	240	300	400
	266 nm	100	120	150	200
Energy stability, %	1064 nm	±2			
Jitter, ns ⁽³⁾		±1,0			
Polarization		Linear			
Beam diameter (near field), mm		~9	~10	~11	~12
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		550 x 200 x 133			
Power supply / cooling system model		2 x LPS-1000, 470 x 460 x 280 / ~22			
Size (D x W x H), mm / Weight, kg					
Mains parameters		2 x 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

