

SPECTRA-PHYSICS VSL-337ND-S AIR-COOLED NITROGEN LASER SYSTEM

Optical Characteristics	
Wavelength	337.1 nm
Spectral Bandwidth	0.1 nm
Repetition Rate	<1 to 30 Hz, up to 60 Hz burst mode
Pulse Width, FWHM	<4 ns
Pulse Energy	300 µJ
Pulse to Pulse Energy Stability	<4% std. dev.
Peak Power	75 kW
Average Power	6 mW at 20 Hz
Beam Area	35 mm ²
Beam Divergence, Full Angle	0.5 mrad typical

Electrical Characteristics	
External Trigger	TTL
Trigger In to Optical Pulse Out	700 ns nom.; ≤ 40 ns std. dev. jitter
Power Consumption	150 W at 10 Hz
Optosync Output	TTL 50Ω
Optical Pulse to Optosync Delay	50 ns; <500 ps std. dev. jitter
Burst Input	TTL, High = disabled

Services and Equipment	
Air Flow Requirements	
12 CFM	
Electric Service Requirements	
Voltage	110 or 220 Vac
Current	1.5 @ 110 Vac 1.0 @ 220 Vac
Frequency	50/60 Hz
Phase	Single
Environmental	
Temperature Range	4 – 40°C (40 – 105°F)
Humidity (noncondensing)	0 – 95%
Altitude	0 – 3000 m (0 – 9800 ft)

Ordering Information	
VSL-337ND-S Standard 110 V	P/N 337201-00
VSL-337ND-S Standard 220 V	P/N 337201-01

Features and Benefits:

- Modular design
- No alignment required
- Quiet
- Variable pulse rate
- Patented sealed plasma cartridge
- Field-replaceable plasma cartridge
- Power on demand
- Externally triggered
- Low EMI

Applications:

- MALDI-TOF mass spectrometry
- Laser-induced fluorescence
- Cell ablation
- Medical diagnostics
- Materials research



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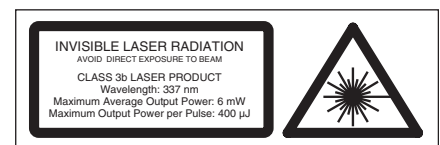


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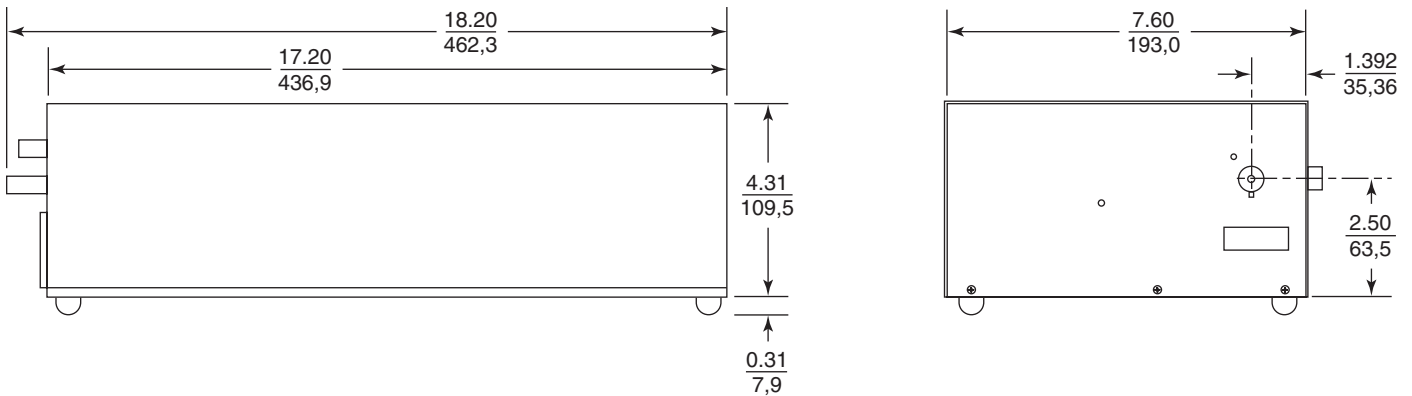


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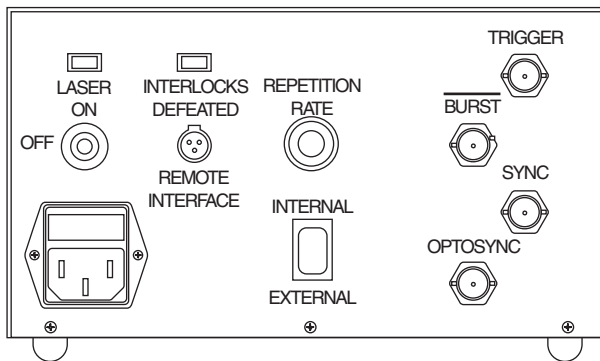
The VSL-337ND-S nitrogen laser emits 4 ns pulses in the UV at 337 nm. The pulse repetition rate may be varied from 1 to 60 Hz with a pulse energy of up to 300 μ J. The laser may be triggered internally or externally. A unique feature of the VSL-337ND-S is the Optosync port, which delivers a high-speed TTL signal derived from the laser itself that results in sub-nanosecond jitter. Constant pulse shape and good pulse-to-pulse stability were designed into the VSL-337ND-S with our fixed-electrode and discharge-stabilizing pre-ionizers.

The VSL-337ND-S features our user-replaceable plasma cartridge, allowing the customer to regain the performance of a new laser at a fraction of the cost. Our patented design ensures minimal downtime because no adjustments are necessary for the resumption of full-spec performance. The plasma cartridge typically maintains at least 70% of its energy for 20 million pulses.

The output of the VSL-337ND-S laser is near-diffraction limited and produces a collimated beam that can be focused to a $<3 \mu$ m spot of peak power with energy density of 4.5 kJ/cm². This versatile laser may also be equipped with one of its dye laser accessories, the DUO 220 or DUO 210, for obtaining tunable output from the IR to the UV.



Dimensions given in $\frac{\text{inches}}{\text{mm}}$



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VSL-337ND-S Laser

Size (L x W x H)

18.2 x 7.6 x 4.6 in.
 (463 x 193 x 117 mm)

Weight

16 lb (7.3 kg)