SPECTRA-PHYSICS 337-Si AIR-COOLED NITROGEN LASER SYSTEM

Optical Characteristics	
Wavelength	337.1 nm
Spectral Bandwidth	0.1 nm
Repetition Rate	Up to 20 Hz, user-supplied trigger
Pulse Width, FWHM	4 ns
Pulse Energy	300 µJ at 10 Hz/150 µJ at 20 Hz
Pulse to Pulse Energy Stability	3% std. dev. at 10 Hz
Peak Power	75 kW
Average Power	3 mW at 10 Hz
Beam Area	35 mm^2
Beam Divergence, Full Angle	0.5 mrad typical

Electrical Characteristics	
External Trigger	TTL, Optoisolated
Trigger In to Optical Pulse Out	< 1 µs; < 40 ns std. dev. jitter
Power Consumption	15 W at 10 Hz/24 W at 20 Hz
Optosync Output	TTL 50Ω
Optical Pulse to Optosync Delay	50 ns; < 500 ps std. dev. jitter

Services and Equipment	
Air Flow Requirements	
	12 CFM
Electric Service Requirements	
Voltage	+24 Vdc
Current	< 1 A peak 600 mA average at 10 Hz
Environmental	
Temperature Range	4 – 40˚C (40 – 105˚F)
Humidity (noncondensing)	0 – 95%
Altitude	0 – 3000 m (0 – 9800 ft)

Ordering Information	
337-Si 10 Hz	P/N 337203-00
337-Si 20 Hz	P/N 337203-01

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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UK: (44) 1442-258100
Other European Countries:
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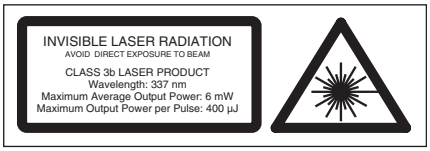
Other Pacific Countries:
1-650-961-2550



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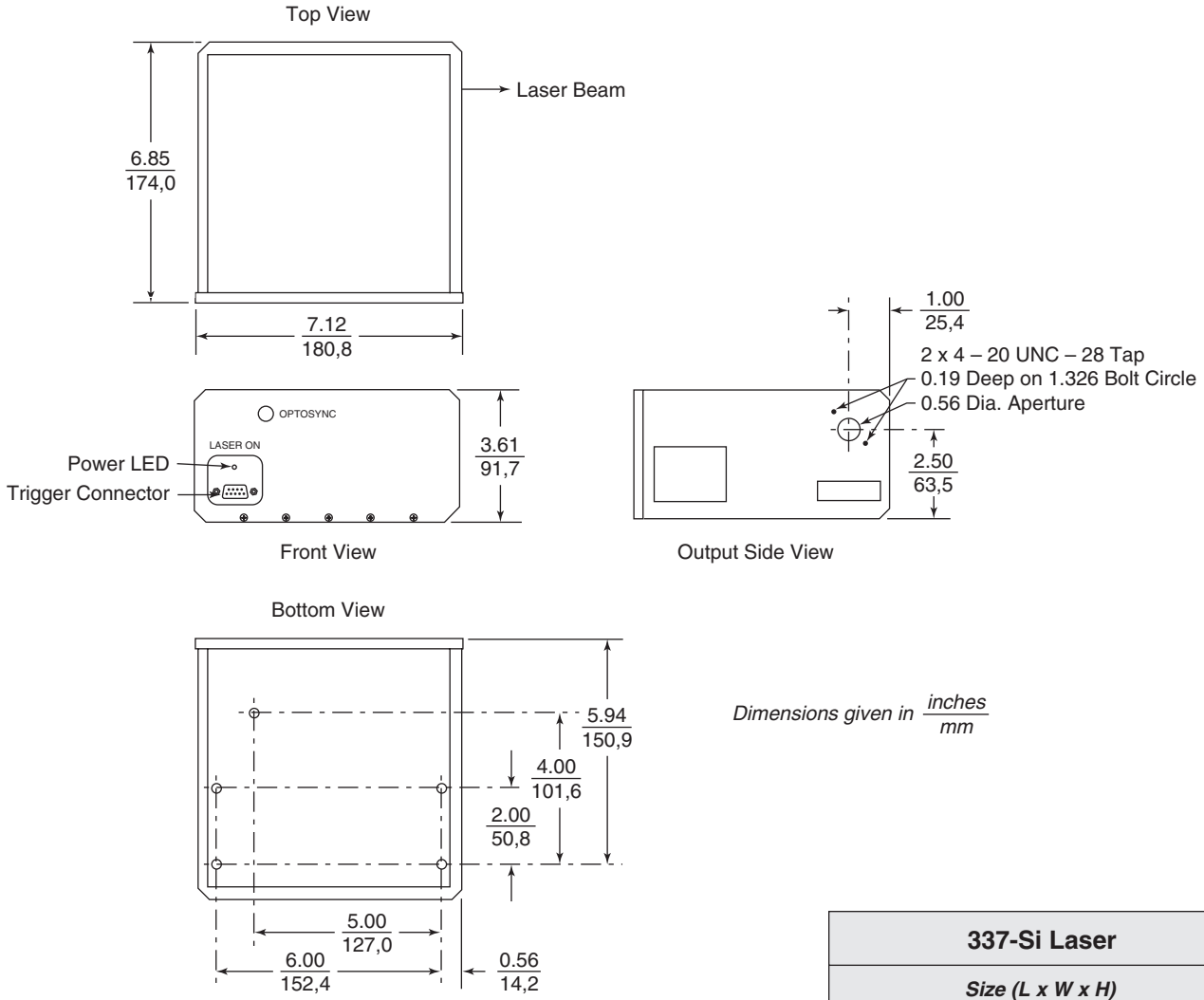
The 337-Si nitrogen laser emits 4 ns pulses in the UV at 337 nm. The pulse repetition rate may be varied from 1 to 20 Hz with a pulse energy of up to 300 µJ. The laser is externally triggered by a TTL level pulse. A unique feature of the 337-Si is the Optosync port, which delivers a high-speed TTL signal derived from the laser itself that results in sub-nanosecond jitter. Constant pulse shape and good pulse-to-pulse stability were designed into the 337-Si with our fixed-electrode and discharge-stabilizing pre-ionizers. The output of the 337-Si laser is near-diffraction limited and produces a collimated beam that can be focused to a < 3 µm spot of peak power with energy density of 4.5 kJ/cm^2.

The 337-Si 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 337-Si was developed specifically for OEM applications requiring low radiated emissions (EMI) and low power consumption for compatible operation with other sensitive electronic equipment. It incorporates technology developed to supply a space-hardened laser for the Japanese Experiment Module on the International Space Station. The compact size and profile affords easy system integration.



Dimensions given in *inches* / *mm*

337-Si Laser
Size (L x W x H)
7.1 x 6.8 x 3.6 in. (180,3 x 172,7 x 91,4 mm)
Weight
9 lb (4,1 kg)

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