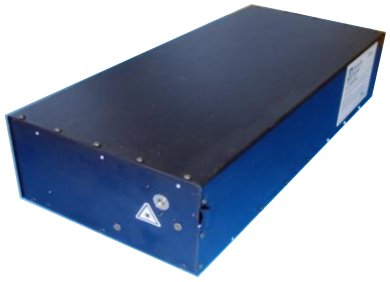
Passat

Naples 355

Designed Specifically for MALDI Mass Spectrometry

All Solid-State UV Laser



The Naples 355 is an affordable, rugged, turnkey, compact, all solid-state, pulsed, nanosecond UV laser. Designed specifically as an ionization source for MALDI-mass spectrometry, this stable reliable, efficient, passive Q-switched, diode-pumped, frequency-tripled Nd:YAG source can directly replace high-maintenance nitrogen lasers in a broad range of research and industrial applications.

The Naples 355 is available in three models:

- 250 μJ/Pulse @ 200 Hz max; or`
- 50 μJ/Pulse @ 1 kHz;

with either collimated or fiber coupled output.

Applications

- MALDI Mass Spectrometry
- Laser fluorescence and imaging
- Raman spectrometry
- Flow measurements
- Engraving, marking, trimming, surface cleaning
- Short-range remote sensing, inspection
- Medicine

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Content and Delivery

The turnkey package includes the following:

- Integrated Laser Head, Driver, and Power Supply Unit;
- 2m Output Fiber;
- Power Cable;
- Test Record.
- Direct collimated or focussed fiber outputs are available as options

Specifications

Parameter	***Naples 355***
Wavelength	355 nm
Energy Output (without fiber)	Naples 355-250/200: 250 μJ/pulse at 200 Hz Maximum Repetition Rate Naples 355-50/1000: 50 μJ/pulse at 1 kHz Maximum Repetition Rate
Energy Output (after fiber)	Naples 355-250/200: 210 μJ/pulse (300-μm fiber; NA=0.22; 200-μm fiber, NA=0.22) Naples 355-50/1000: 42 μJ/pulse (200-μm fiber; NA=0.22)
Repetition Rate	Internal Trigger - variable from 1 Hz to maximum repetition rate in 1Hz Increments External Trigger – single shot to the maximum repetition rate
Pulse-to-Pulse Stability*	3 %
Output Energy Attenuation	10-100% in 1.5% increments (variable continuously via software controlled Serial port with a response time of less than 1 s for switching from minimum to maximum energy and accuracy ~3%; capability to adjust the laser energy in “real” time)
Pulse Counter	Accessible via RS-232 port (up to $4 \cdot 10^9$ pulses)
Pulse Width	3.5 ns
Q-Switch	Passive
Divergence	Diffraction Limited at any attenuation
Beam Profile (without fiber)	Gaussian at any attenuation
Beam Diameter at the Laser Unit Output (After Collimator)	~ 500 μm
Output Aperture Height (without fiber)	48 mm
Output Beam Pointing Stability (std dev, 1 h, after Collimator)	0.2 Diffraction Limit
Line Width	0.01 cm^{-1} (Fourier limited)
External Control	TTL or +4 V ± 1 V, into 1 kΩ
Control Interface	RS-232
Electrical Power	100-240 VAC, 47-63 Hz, Single Phase
Power Consumption	< 40 W
Warm Up Time	< 1 min
Laser Unit Dimensions	435 x 195 x 97 mm^3 (17.1 x 7.7 x 3.8 in^3)
Weight	6.6 kg
Operating Temperature and Humidity	16-28° C; 10-85 %
Compliance	CDRH, CE

* Custom option: 2% of pulse-to-pulse stability.

Features

- Better than 3% pulse to pulse energy stability;
- Simple external computer control over the repetition;
- Rate and output energy via the built-in RS232 port;
- Fiber delivery allows this Class 3B laser to be easily integrated into OEM;
- Products with Class 1 requirements;
- Optional direct collimated or focussed fiber termination outputs available.

Warranty

1 year for all parts and labor excluding the laser pump diode. The pump diode is warranted for the lesser of 1 year or 10^9 pulses. In the event of failure, Passat will ship a replacement unit within 24 hours of being notified.

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