SECTION - C

TECHNICAL SPECIFICATIONS OF STORES AND DRAWINGS.

Specifications for Nd-YAG laser with harmonic generator

Repetition Rate	10 Hz
Energy (mJ)	
1064 nm	≥ 400 mJ
532 nm	≥ 200 mJ
355 nm	≥ 100 mJ
Pulse width	
1064 nm	5-8 ns
532 nm	4-6 ns
355 nm	4-6 ns
Energy Stability	
1064 nm	≤ ± 3 %
532 nm	≤ ± 4 %
355 nm	≤ ± 6 %
Power Drift	
1064 nm	≤ ± 3 %
532 nm	≤ ± 6 %
355 nm	≤ ± 7 %
Pointing Stability	
1064 nm	< 45 µrad
532 nm	< 45 µrad
355 nm	< 45 µrad
Harmonic module installation	Easy to setup. (Insertion/ removal and tuning of the harmonic module should be quick and user friendly. Critical alignment should not be required after insertion/ removal of the harmonic module. Automatic phase matching of harmonic module would be preferred).
Line width	≤ 1 cm^{-1}
Beam divergence	≤ 0.5 mrad
Beam diameter	5-8 mm
Beam spatial profile	
Near field	≥ 0.7
Far field	≥ 0.9

Polarization

1064 nm	Horizontal
532 nm	Vertical
355 nm	Horizontal

Flash lamp life time Higher life time would be prefer

Synchronization pulse A variable +/- > 100 ns pulse with respect to Q-switch pulse is required for synchronize the different diagnostic systems.

Cooling Close loop water to air heat exchanger
(No external cool water is required)

Electrical requirement 220-240 V @ 50 Hz

Warranty Minimum one year for complete system

Delivery Within 180 days from the date of Purchase Order.

Note :

1. Kindly quote the required accessories, e.g. harmonic generators, wavelength separators for second and third harmonic outputs and interface software for remote (PC) operation.
2. Factory test report which include, laser energy (fundamental as well as second and third harmonic), energy stability, beam profile, beam divergence and pointing stability should be submitted to IPR before shipment of laser system.
3. Vender shall perform installation and testing at IPR and also demonstrate the complete operation of laser system.
4. Following test to be perform at IPR-
   (i) Laser energy (fundamental as well as second and third harmonic out puts)
   (ii) Beam profile
5. The above item will be accepted only after successful operation in IPR.

Compliance sheet

Description	IPR specifications	Offered specifications
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532 nm	≥ 200 mJ	
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	to Q-switch pulse is required for synchronize the different diagnostic systems.	
Cooling	Close loop water to air heat exchanger (No external cool water is required)	
Electrical requirement	220-240 V @ 50 Hz	