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INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION Powai, Mumbai 400076

Technical Specifications for Nd: YAG Laser with second harmonic generator

The system should have the following specifications and features:

1. Repetition rate (Hz) : 10, should be adjustable with single shot

function

2. Energy (mJ) $: \ge 800 @ 1064 \text{ nm}$

 \geq 350 @ 532 nm

3. Pulse duration (ns) : < 10 ns (Preference will be given to lower pulse

duration)

4. Beam diameter (cm) : < 1

5. Divergence (mrad) $: \le 0.6 \ @ 1064 \text{ nm}$ 6. Energy stability (% RMS) $: \le 1 \ @ 1064 \text{ nm}$

≤ 1.5 @532 nm

7. Pointing stability (μ rad rms) : < 508. Jitter (ns) : $\le \pm 0.5$ 9. Linewidth (cm^-1) : ≤ 1

10. Polarization : Vertical, >90%

11. Beam profile : Hat top in NF and Gaussian in FF

12. Flash Lamp lifetime : ≥ 30 million shots 13. Power input : 220-250 VAC, 50 Hz. 14. Operating ambient : 25 to 30 °C

15. Storage ambient: 5 to 50 °C16. Coolant: Water17. External trigger control: Required18. Ambient humidity: \geq 50% RH

- 19. Should be able to change the flash lamps easily without the requirement of optics realignment.
- 20. Warranty: Minimum 2 years full system warranty from the date of successful installation/commissioning of equipment
- 21. The laser should be with water to air heat exchanger and without external water cooling.
- 22. There should be a provision to upgrade to other harmonics in the future easily. System should be able to generate ≥ 230 mJ at 355nm.
- 23. There should be a provision to vary pulse energy with a remote control or a software.
- 24. Please provide input on delivery period.

- 25. It is mandatory that it should be previously installed at least at two different locations in Premiere institutes and/or research labs of Government of India (such as IITs/ IISERs/NITs/ DRDO labs/ DAE labs/ CSRO labs / ISRO labs), which are using it for research purposes. Please provide the details in the **Format-4** provided .
- 26. Please provide contact addresses of previous installations of the system quoted for.