	INDIAN INSTITUTE OF TECHNOLOGY BOMBAY **MATERIALS MANAGEMENT DIVISION** **Powai, Mumbai 400076.**

Ref. PR No. 1000057864 **RFx. No. 6100003230**

Technical Description: Nd:YAG Laser for Pulsed Laser Deposition

Item Description and Detailed Technical Specification				
Sr No	**Specification for a Nd:YAG Laser for Pulsed Laser Deposition**	**Parameter/ Detailed Technical Specification**	**Technical Compliance (Yes / No)**	**Additional Information (if any)**
1.	Nd:YAG Laser for PLD application with Stable Telescopic Resonator			
2.	Oscillator Design	Should be a twin rod oscillator design, with birefringence compensation.		
3.	Repetition Rate	10 Hz		
4.	Output Energy			
	a. 1064 nm	≥ 850 mJ		
	b. 532 nm	≥ 425 mJ		
	c. 266 nm	≥ 100 mJ		
5.	Pulse Stability (±%) [RMS]			
	a. 1064 nm	2% or better		
	b. 532 nm	3% or better		
	c. 266 nm	6% or better		
6.	Pulse Width (ns)			
	a. 1064 nm	≥ 9 – 12 ns		

	b. 532 nm	≥ 8 – 11 ns		
	c. 266 nm	≥ 7 – 10 ns		
7.	Beam diameter	9.5 mm (Full angle for 90% of the output energy)		
8.	Beam Divergence	< 0.8 mrad		
9.	Pointing Stability	< 50 µrad (Full Angle)		
10.	Timing Jitter	< 0.5 ns		
11.	Linewidth @ 1064 nm	<0.7 cm^{-1}		
12.	Lamp Life	100 million pulses		
13.	Voltage	220–250 VAC		
14.	Frequency	50/60 Hz		
15.	Power Phase	Single Phase		
16.	Cooling	Air Cooled		
17.	Ambient Temperature	5 – 35 °C		
18.	Spatial Profile	A quasi-top-hat profile with a relatively uniform central intensity distribution		
19.	Power supply	Power Supply unit should be supplied alongwith the Laser System		
20.	Warranty	1 Year		