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

Ref. PR No. 1000051208 Rfx. No. 6100002685

Item Description: Neodyamium doped Yttrium Aluminium Garnet (Nd-Yag) solid state laser for pulsed laser deposition.

Sr. No	Item Description	Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
1.	Neodyamium doped Yttrium Aluminium Garnet (Nd-Yag) solid state laser for pulsed laser deposition	Application Pulsed Laser Deposition System - Nd:YAG pulsed laser with 1064 nm wavelength, 532 nm wavelength with frequency doubler module and 266 nm wavelength with frequency quadrupler module Repetition rate 0 – 10 Hz adjustable frequency rate within this range Output energy per pulse (mJ) 850 mJ or higher at 1064 nm and 100 mJ or higher at 266 nm (after quadrupling the frequency) Pulse-to-pulse energy stability ± 2% or better at 1064 nm; ± 8% or better 266 nm Power drift +/-3% or better at 1064 nm; +/- 10% or better at 266 nm over 5 hours or more without readjustment of phase-matching between the operating temperature range Pulse duration (length) ~6-10 ns at 1064 nm; ~5-10 ns at 266 nm		

		Beam diameter (mm) ~9 – 12 mm at 1064 nm Beam divergence (mrad) <0.55 at 1064 nm M2 (Beam parameter product) at 1064 nm ≤ 2 Pointing stability (µrad) <45 at 1064 nm, 266 nm Line-width at 1064 nm ≤ 0.75 cm-1 Lamp life (pulses) 5 x 107 or higher at 80% energy or 1 year, whichever comes earlier Timing jitter (ns) ≤ ± 0.5 Voltage (VAC) 220 – 250 Frequency (Hz) 50 Power phase Single Operating temperature range 18° – 25° C or wider Maximum storage temperature range -10° – 50° C or wider Water chiller With appropriate specs to keep the system within operating temperature range warranty: 12 months		