

Technical Specifications for Green Laser with high speed modulation

- The vendor must quote for a Laser whose specifications are given in the table below.

Parameter	Specifications	Complied /Not Complied	Reference Page No.
Wavelength	515-540 nm		
Spectral Width	≤ 2 nm		
Maximum output power	≥ 20 mW		
Power Stability	$< 1\%$ (8 hours)		
RMS noise	$< 0.25\%$ (0.5 kHz - 1 MHz)		
Mode	TEM ₀₀		
Beam Divergence	< 1.5 mrad (full angle)		
Beam Symmetry	$\geq 90\%$		
Beam alignment	< 10 mrad		
Beam Diameter at aperture	< 2 mm		
Pointing stability	< 5 μ rad/ $^{\circ}$ C		
Polarization Orientation	Vertical		
Polarization Extinction ratio (PER)	$> 50:1$		
Digital Modulation	> 150 MHz		
Modulation extinction ratio (on/off) or depth	≥ 60 dB		
Analog Modulation	≥ 500 kHz		
PC communication interface	USB		
Computer control software	Must Include GUI interface with API for programming		
Laser controller/driver	Must be compatible with standard Indian AC single phase power supply (230 V, 50 Hz)		
Temperature control	Must include temperature controller		
Accessories	All the necessary power cables and other accessories for powering the equipment and communication cables for computer interface must be provided. Also, any needed heat sinks should be provided.		
Specification sheet	Both hardcopy and softcopy with detailed specifications and manuals (operation and programming) should be provided in the English language.		
Safety features	Instrument should come with safety interlock and all necessary safety features for its own safety and for that of the user.		

ANNEXURE -III

Installation, Demonstration and Training	To be done at IIT-M location		
Previous products from vendor	At least 5 lasers of the same manufacturer and series (wavelength can be different) should have been supplied by the vendor in India within the last 5 years. Customer's information for at least for 5 should be provided.		
Warranty& Documentation	Minimum 1-year warranty should be provided Usage Guide in English Language. Calibration Certificate also required.		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)