



भारत सरकार/ GOVERNMENT OF INDIA
अंतरिक्ष विभाग/ DEPARTMENT OF SPACE
भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान/INDIAN INSTITUTE OF SPACE SCIENCE & TECHNOLOGY
क्रय एवं भंडार विभाग / PURCHASE & STORES DEPARTMENT
वलियमला (पीओ.), तिरुवनंतपुरम 695 547/ VALIAMALA P.O, THIRUVANANTHAPURAM 695 547
केरल, भारत/ KERALA, INDIA
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निविदा आमंत्रण / INVITATION TO TENDER

Date : 11.05.2018

Tender Due on : 19.06.2018 at 14.00 Hrs

Tender opening on: 20.06.2018 at 10.30 Hrs

Dear Sirs,

Sealed tenders are invited from accredited manufacturers / suppliers / agents for the supply of the following equipment:

Sl. No.	Tender No.	Item Description	Qty/ Nos.	Cost of Tender (₹)	
1.	2017005005	Portable Dual Cavity Nd-YAG Laser, 532 nm, Dual pulsed for PIV applications and upgradable for PLIFF applications.	1 No.	500+GST @12% (₹560/-)	
Specifications :					
Technical specifications of the portable dual cavity Nd:YAG Laser					
1.		Wavelength			532 nm
2.		Spectral purity			greater than 98% at 532 nm
3.		Max. repetition rate			2 x 15 Hz or higher
4.		Pulse Repetition Rate			Adjustable from 1 Hz to max repetition rate
5.		Energy per pulse @532nm			2 × 175-200 mJ @ max repetition rate
6.		Pulse Inter-frame timing			1 µs to 10 ms
7.		Pulse width			less than 10 ns @ 532 nm
8.		Pulse to Pulse energy Stability			≤ 2% of RMS @ max. repetition rate
9.		Beam Diameter (Near field)			less than 7 mm
10.		Near field beam profile			Circular beam with Top hat/ Gaussian energy distribution provided Maximum energy of pulses from both lasers should align with center. Beam profiles should be submitted along with technical quotes for laser 1 and laser 2 at max. Energy and max. Repetition rate
11.		Beam Divergence			less than 4 mrad @ 532 nm
12.		Pointing Stability			less than ±100 µrad
13.		Near field beam overlap			± 100 µm
14.		Far field beam overlap			± 100 µrad
15.		Polarization			Linear
16.		Timing Jitter (ns)			better than ± 1 ns

		17.	Lamp Life (pulses)	> 3×10 ⁷ shots (If additional flash lamps are required to meet this specification, it should be included in the quote with its cost)						
		18.	Operating temperature	18°C to 28 °C without any significant change in performance						
		19.	Cooling	Suitable cooling for maintaining the above operating conditions						
		20.	Safety	Electronic or mechanical Safety shutter						
		21.	Voltage	210 - 240VAC						
		22.	Frequency	50-60Hz						
		23.	Power	Single Phase						
		24.	External Triggering	Externally triggerable using TTL signal from any standard delay generators from 1 Hz to Max. repetition rate						
		25.	Warranty Period	1 Year from the date of Installation and Commissioning						
		26.	a) Extended warranty – 2 years after warranty period. b) AMC after the warranty Period	a) Please quote charges for two year's extended warranty. b) Please quote non-comprehensive (service) AMC charges for One year after the Warranty period.						
		27.	Service personnel	Nearest location that are stationed who can attend the service requests should be mentioned						
		28.	Spare parts	Spare parts should be available for a period of 10 years from the day of commissioning						
		29.	List of buyers	List of researchers who bought and using this laser should be provided along with their contact details.						
		30.	Humidity	Relative humidity in Trivandrum is 60-80%. Laser performance should not get affected by this Relative Humidity						
		31.	Delivery period	Less than or equal to 20 weeks after the receipt of Purchase Order						
		<u>Optional Items (cost should be specified separately)</u>								
		1.	Motorized attenuator							
		2.	Provision for housing of 355 nm or 266 nm crystal, dichoric separator and beam dump inside laser head	Possibility of housing other harmonic crystals (one at a time), dichoric separators, and beam dump for avoiding unwanted wavelength inside the laser head should be mentioned. If, it is available with your laser model, it should be mentioned and if there is any additional cost involved for this provision, only the additional cost should be mentioned separately as an optional one.						

		<p><u>Other Requirements:</u></p> <ol style="list-style-type: none">1. System should be able to operate only one laser or both. It should be possible to select the internal lamp frequency. It should also be possible to vary the energy of each laser independently.2. It should be possible to trigger the flash lamps and the q-switch in the same frequency in external mode.3. Laser housing should be sealed to protect it from dust.		
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Commercial terms and Conditions Tender No. 201700500501 dated 11.05.2018

1. SPECIAL INSTRUCTIONS TO TENDERERS

- 1.1 The bidder is required to submit quotation for the entire scope in *TWO PART* viz, Technical and commercial bid and price bid separately. The first cover shall contain the technical and commercial details along with the format of price quotation without the price superscribing in the cover *“Technical and Commercial-Tender No. 2017005005, Due on 19.06.2018”*. ***The second cover shall contain the prices superscribing in the cover “Price Bid- Tender No. 2017005005, Due on 19.06.2018”. All the covers to be sealed and insert in another cover super scribing the “Tender No. 2017005005, Due on 19.06.2018” and submit immediately but not later than the due date mentioned against each tender. If the tender is received after the due date and time, the same shall be summarily rejected.***
- 1.2 The cost of tender ₹560/-(inclusive of GST) shall be submitted ***along with Technical & Commercial bid by Demand Draft*** drawn in favour of the Senior Accounts Officer, IIST and payable at State Bank of India, Valiamala Trivandrum-695 547. ***In case the Demand Draft is not enclosed with the quotation, the bid shall be summarily rejected.***
- 1.3 **Payment:** Our normal payment term shall be E-Transfer / within 30 days after supply/installation and acceptance for imports and indigenous respectively.
- 1.4 The installation and commissioning of equipment to be executed at our IIST campus, Valiamala, Thiruvananthapuram-695 547. All pre-requisites such as foundation drawing, grouting and any consumables needed for carrying out the installation, if applicable, shall be separately mentioned in the technical bid.
- 1.5 Delivery terms shall be Ex-works/FOB/FCA for imports and FOR, Valiamala for indigenous.
- 1.6 For import cargos, the purchase order shall be drawn directly to the foreign supplier through agents in India. We have our own designated freight forwarder and customs clearance at Trivandrum shall be done by us.
- 1.7 All duties and taxes, if applicable shall be quoted separately.
- 1.8 Accreditation documents such as current income tax/sales tax clearance certificate, clientele list with previous experience in the similar lines of supply must be provided with documentary evidence), Performance Certificate, authorization for import, after sales support in India etc. shall be explained in detail with proof.
- 1.9 **Guarantee & Replacement:**
 - a) The supplier shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
 - b) Please see the Clause No.25 &26.of the Technical specification
- 1.10 **Earnest Money Deposit (EMD):** Interest free EMD to ensure the earnestness of the vendor in the participation of the procurement process to the tune of **₹62,200/-** by Demand Draft drawn in favour of the Sr. Accounts Officer, IIST, Valiamala, Trivandrum may be enclosed with Technical & Commercial bid sealed cover. The EMD will be refunded to the unsuccessful tenderers within 30 days after placement of Purchase Order. EMD will be forfeited in case the vendor withdrawn from the quotation. The tender not accompanied with EMD shall be treated as invalid tender and summarily rejected. For direct offers from NSIC, MSMEs, etc. EMD is not applicable.

- 1.11 **Security Deposit:** Interest free Security Deposit @ 10% of the value of Purchase Order shall be payable by successful vendor for satisfactory execution of the Purchase Order.
- 1.12 **Performance Bank Guarantee:** 10% of order value shall be submitted by the Vendor for satisfying the Warranty obligation.
- 1.13 **Liquidated Damages:** The period of completion indicated shall be the essence of the contract. In the event of delayed date of delivery & Installation, the liquidated damages @ 0.5% per week or part thereof subject to a maximum of 10% of the contract value shall be recovered.
- 1.14 **Force Majeure:** During the continuance of the contract, should a part or whole of the items covered by this contract be delayed in delivery due to reasons of force majeure condition which shall include Lockouts, Strikes, Riots, Civil Commotions, Fire, Flood, Windstorm, Explosion, Labour Disturbance, Act of any Govt. or any agency, judicial action, sabotage act of civil disobedience, act of public enemy, technical failure, accidents, acts of God and war, stoppage of deliveries by Govt. etc, each party undertakes to advise the other as soon as it becomes a way of the circumstance of such force majeure, so that action under the provisions of this contract can be mutually reviewed and agreed upon between contractor and IIST. If the force majeure condition extended over a period of six months, both the parties of the contract shall mutually discussed and arrived at an agreement for the continuation/ termination of the contract forthwith.
- 1.15 **Arbitration:** Dispute if any shall be settled mutually, failing which, it will be referred to a one-man arbitrator appointed by Director, IIST in accordance with the Arbitration and Conciliation Act, 1996 and any alteration/modifications thereof, whose decision shall be final and binding on both the parties
- 1.16 IIST reserves the right to either accept/reject any tender/s without assigning any reason/s whatsoever.

Terms & Conditions of Tender Form No. DOS PM:20, Form No. DOS PM:22 & Form No. DOS PM:23 as per attachment.

Sd/-
(M.B Subash Chandran)
Sr. Purchase & Stores Officer
For and on behalf of Director, IIST
