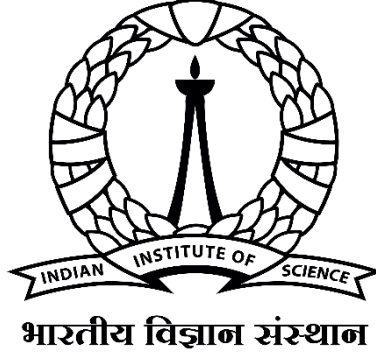


NOTICE INVITING GLOBAL TENDER

Supply and installation of femtosecond oscillator-amplifier laser system



Instrumentation and Applied Physics,
Division of Physical and Mathematical Sciences,
Indian Institute of Science, Bangalore

GTE Approval No. IISc-GTE-2023-251

July 14, 2023

Terahertz Micro-Nanoscience and Technologies Lab, IAP
Bangalore 560012

Table of contents:

1. Section 1: Bid Schedule
2. Section 2: Eligibility Criteria As specified by IISc
3. Section 3: Terms and Conditions As specified by IISc
4. Section 4: Specifications Technical specifications
5. Section 5: Technical Bid Annexure 1: Bidder details
 - a. Annexure 2: Declaration regarding experience of bidder
 - b. Annexure 3: Declaration regarding clean track record of the bidder
 - c. Annexure 4: Declaration of acceptance of tender
 - d. Annexure 5: Terms and conditions. Details of item quoted.
6. Section 6: Commercial bid Quotation with Price, Technical specifications of the Equipment

Section 1 - Bid Schedule

1	Tender No	IAP-MM-22/23-02
2	Tender Date	14-07-2023
3	Item Description	Femtosecond Oscillator-Amplifier Laser system
4	Tender Type	Two bid system Technical Bid (Part A) Commercial Bid (Part B)
5	Place of tender submission	Chairperson office Attn: Dr. Manukumara Manjappa Ground Floor Instrumentation and Applied Physics Indian Institute of Science, Bangalore 560012
6	Last Date & Time for submission of tender	04-08-2023, 5PM (IST)
7	For further clarification	Dr. Manukumara Manjappa Room No: 105 Instrumentation and Applied Physics Indian Institute of Science, Bangalore 560012 Email: mmanjappa@iisc.ac.in Phone: +91-80-2293-3188

Section 2 – Eligibility Criteria

Prequalification criteria:

1. The bidder must have supplied similar systems to at least 5 educational institutes/universities and/or research organizations and to the CFTI's in India along with contact details of at least three independent referees.
2. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.
3. The Bidder's firm should have existed for a minimum of 5 years. (Enclosed Company Registration Certificate)
4. The Bidder must not be blacklisted/banned/suspended or have a record of any service- related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.
5. Original Invoice, Original Warranty Certificate, Original Test Reports should be produced for all imported items from OEM (Original Equipment Manufacturer) at the time of supply of the equipments.
6. System Catalogue should be produced with the Technical Bid.
7. Manufacturer should have ISO or equivalent international standard certificate. Please attach the required certificate with the bid.
8. Supplier should support the user with all the spares for a minimum period of 10 years.
9. The vendor should have qualified technical service personnel/service engineer for the

equipment based in India (preferably in Bangalore). Details of the experienced service engineer including contact details should be provided in tender document.

Section 3 – Terms and Conditions

A) Submission of Tender:

1. All documentations in the tender should be in English.
2. Tender should be submitted in two envelopes (two bid system).
 - a. Technical Bid (Part-A) – Technical bid consisting of all technical details and check list for conformance to technical specifications.

The technical proposal should contain a technical compliance table with 5 columns.

- i. The first column must list the technical requirements, in the order that they are given in the technical requirement below.
 - ii. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible.
 - iii. The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent.
 - iv. The fourth column should state the reasons/explanations/context for deviations, if any.
 - v. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details.
- b. Commercial Bid (Part-B) – Indicating item wise price for the items mentioned in the technical bid, **as per the format of quotation provided in tender**, and other commercial terms and conditions.

3. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description & Due Date.
4. The SEALED COVER superscripting tender number / due date & should reach Chairperson Office, Instrumentation and Applied Physics, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case due date happens to be holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
5. All queries are to be addressed to the person identified in “Section 1 – Bid Schedule” of the tender notice.
6. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document (Indian Bidders only).
7. If price is not quoted in Commercial Bid as per the format provided in tender document

- the bid is liable to be rejected
8. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
 9. Incomplete bids will be summarily rejected.
 10. The decision of purchase committee will be the final.

B) Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.
- c. To reject the tender, offer not confirming to the tender terms.

C) Validity of the Offer:

The offer shall be valid at least 90 Days from the date of opening of the commercial bid.

D) Evaluation of Offer:

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre- qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.
4. The award of contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
 - a. Non-submission of complete offers.
 - b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).
 - c. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall consider that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.

7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. Lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, preprocessing and post processing, optional items, recommended spares, warranty, annual maintenance contract.

E) Pre-requisites:

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

F) Warranty:

The complete system is to be under warranty period of minimum of 3 years (year-wise breakup value should be shown in the commercial bid) including free supply of consumables, spare parts and data analysis software from the date of functional installation. If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

G) Annual Maintenance Contract:

An annual maintenance contract for a period of at least 3 years post warranty should be provided on completion of warranty period. In the bid AMC charge should also be provided.

H) Purchase Order:

1. The order will be placed on the bidder whose bid is accepted by IISc based on the terms & conditions mentioned in the tender document.
2. The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

I) Delivery, Installation and Training:

The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order. The system should be delivered, installed and made functional **within 90 days** from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over of entire system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed.

The bidder should also arrange for technical training to the local facility technologists and users. The technical installation engineer/personnel should provide one-week of on-

site training for the safe and reliable operation of the laser, during the installation. **The technical installation personnel/engineer, who will perform the installation, must possess a proof of training certificate from the manufacturing company/factory/principal, which should be submitted along with the tender offer.**

J) Payment Terms:

100% payments (except AMC) will be released after completion delivery and satisfactory installation subject to TDS as per rules. AMC cost (if ordered), after completion of warranty period) will be released on half-yearly basis at the end of each six months subject to satisfactory services. The AMC will be comprehensive. As per GFR no advance payment can be made to the authorized Indian distributors, unless an equal amount of bank guarantee is provided.

K) Statutory Variation:

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed onto IISc, Bangalore.

L) Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

M) General:

1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.
2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.
3. The bidder may visit the installation site before submission of tender, with prior intimation.
4. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc, Bangalore.

Section 4 – Technical Specifications

A. Technical Specifications of the Femtosecond Oscillator-Amplifier Laser system and accessories are provided below:

I. SEED Oscillator Essential requirements:

Integrated, Automated Mode locked One-box Titanium Sapphire Laser Oscillator with Integrated CW pump laser:

1. Central wavelength: ~ 800 nm
2. Power: > 450 mW
3. Output pulse width: < 35 fs.
4. Bandwidth: ~60-70 nm
5. Pulse repetition rate: ~80 MHz
6. Power stability: < ±0.5% over 2 hours
7. RMS Noise <0.05%
8. Beam M^2 : < 1.3
9. Polarization: Linear. Horizontal/Vertical
10. Beam divergence: <1 mrad
11. Should be compatible to place external pulse compressor and should have the capability of generating < 20fs pulses using external compressor.
12. System should be supplied with all necessary pump laser, power supplies, water chiller, system controllers, laptops, softwares and other necessary accessories.

II. Regenerative Amplifier unit: Essential requirements: Fully compatible with above seed laser unit

1. Pulse energy: $\geq 7\text{mJ}$
2. Pulse duration : $\leq 35\text{ fs}$
3. Central wavelength: ~800 nm
4. Pulse repetition rate: 1 kHz
5. Power stability: <0.5% rms
6. Pre-pulse contrast ratio: >1000:1
7. Post pulse contrast ratio : >100:1
8. Mode quality: TEM₀₀
9. Beam M^2 : <1.25
10. Polarization: Linear, Horizontal/Vertical
11. Beam Pointing stability: <10 urad rms
12. Beam Diameter (1/e²): 9-12mm

III. Q-switched DPSS -Pump Laser for Amplifier: Essential Requirements

1. Wavelength: 527nm
2. Pulse Repetition Rate: 1kHz
3. Avg Power: $\geq 38\text{W @}1\text{kHz}$
4. Pulse Energy Stability :< 0.5% rms
5. Polarization: Linear, Horizontal/Vertical

IV. Essential requirements and features:

1. The pump laser, the seed laser and the regenerative amplifier should be in a **one-box** set up, and all three of the above should be sourced from a single factory/principal/manufacturing company.
2. In addition to seeding the amplifier, a separate output > 200 mW from the Oscillator laser (80MHz, pulse width <35 fs) should be provided (i.e., an output simultaneously with the amplifier being switched ON). This laser path should be tested for all the specified requirements provided in the item I above. This path should be compatible to place an external pulse compressor, if needed in future.
3. The Stretcher/compressor assembly for the amplifier system should have enhanced stability and reliability to prevent contamination and for better grating lifetime.
4. Amplifier system should be fully tested in Accelerated Stress Screening chamber or in similar conditions (including oscillator, pump, regen and stretcher/compressor) for optimum reliability and robustness. The necessary test results should be provided.
5. Long term stability (> 48hours of continuous run) in the amplifier laser power/pulse and polarization should be tested and test data to be provided.
6. **Necessary chillers** for the safe and reliable operation of the one-box femtosecond amplifier laser system must be included in the tender offer. The **additional coolant, tubings, connectors** etc. required for complete functioning of the chillers, should be included in the quotation.
7. All required **laptops, softwares, cables, specific extension boards and other accessories** necessary for the safe and reliable operation of the amplifier, oscillator and the pump lasers should be provided and included in the tender offer. **No further accessories (other than the optical table, UPS and power outlets) should be required** for safe and reliable operation of the entire one-box femtosecond amplified laser system.
8. The system should be operable with **220-240 VAC, 50 Hz** power supply and the all the power ratings for all the components in the system must be matching the Indian electric power outlet conditions and the all the necessary electrical components must be provided.
9. A **USB compatible spectrometer, suitable auto-correlator and a power meter** used to measure the pump, oscillator and amplifier output beam characteristics including but not limited to pulse width, output power and laser beam profile should be included in the quote.
10. An option of obtaining a **stand-alone, independent output from the pump laser, 527nm (i.e., item III above)**, when the amplifier is NOT switched on, must be included. There should be no compromise on the functioning, specifications and requirements of the oscillator and amplifier as described above.

• Any deviation from not providing proper documentation is subject to rejection as per IISc choice for non-compliance.

B. Training and demonstration

- Complete installation of the Femtosecond Amplified Laser system needs to be provided.
- Training for users by the company personnel present 'on site' immediately after the installation.
- All pre-installation requirements to have the system installed in ideal room conditions should be included in the quote and all the necessary arrangements needs to be in place before the installation.

- During installation of the product, the specifications should be demonstrated onsite (at IISc, IAP department, Bangalore, India) for the equipment at a minimum, particularly:
 - (1) stated output powers of the oscillator and the amplifier.
 - (2) the simultaneous power output of >200 mW from the oscillator (i.e., simultaneously with the amplifier being switched ON).
 - (3) option of pump laser as a stand-alone option when the amplifier is NOT used
 - (4) pulse width of the Oscillator and amplifier
 - (5) bandwidths of the amplifier and the oscillator
 - (6) pump power output
 - (7) wavelength of oscillator, pump and amplifier

C. Others

- Supplier should agree to provide Performance test reports prior to dispatch of goods.
- The vendor must submit references from previous installations.
- Authorisation letter from OEM manufacturer to be included.
- The cost of shipping to IISc should be included.
- The names and contact addresses of the referees must be submitted with the proposal, so the purchase committee can contact them independently.
- The system should require minimal maintenance.
- If any recurring issues/fail to meet the technical specifications of the laser including power (pulse energy), pulse width and polarization of the laser (oscillator/pump/amplifier) at any point of time within the warranty period, then the warranty period for that part should be correspondingly extended. Replacement or rectification of the faulty part should be conducted within 30days after reporting the problem.
- Vendor must provide complete compliance statement against each technical point.
- Mention the recommended preventive maintenance schedule for the system. Any accessories needed for periodic preventive maintenance during the warranty period and later, should be mentioned in separately the itemized quote.
- Can the preventive maintenance be done by a trained on-site engineer or requires a specialist from the OEM? If the latter, please provide cost of a 3year AMC with required kit/consumables.
- Valid and highest-level safety, health and environmental protection certification (depending on the region/country) must be provided for the proposed system. The original certificate should be provided with the Unit.
- Operation Manual to be given after installation and acceptance of equipment.
- The system should be supported by a trained local representative and should have a < 48 hour window of response.

Section 5- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

The Chairperson,
Attn: Dr. Manukumara Manjappa
Instrumentation and Applied Physics,
Indian Institute of Science
Bangalore – 560012, India

Annexure-1:

Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

Sl. No	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name
Designation, Seal

Date:

Annexure-2:

Declaration regarding experience

To,
The Chairperson,
Instrumentation and Applied Physics, Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No: XXXXXXXXXXX Dated: XXXXX

Supply and installation of Femtosecond Oscillator-Amplifier Laser system in the Terahertz micro-nanoscience and Technologies (TMNT) lab, IAP, IISc Bangalore.

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has years of experience in supplying and installing Femtosecond Oscillator-Amplifier Laser system.

(Signature of the Bidder)

Printed Name Designation, Seal Date:

Annexure-3:

Declaration regarding track record

To,
The Chairperson,
Instrumentation and Applied Physics,
Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No:
XXXXXXXX Dated:
XXXXXX

Supply and installation of Femtosecond Oscillator-Amplifier Laser system in the Terahertz micro-nanoscience and Technologies (TMNT) lab, IAP, IISc Bangalore.

Sir,
I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred /blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

Sl.No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long
-------	---	--	--------	-----------------------------

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name
Designation,
Seal

Date:

Annexure – 4:

Declaration for acceptance of terms and conditions

To,
The Chairperson,
Instrumentation and Applied Physics,
Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No:
XXXXXX Dated: XXXX

Supply and installation of Femtosecond Oscillator-Amplifier Laser system in the Terahertz micro-nanoscience and Technologies (TMNT) lab, IAP, IISc Bangalore.

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure – 5:

Details of items quoted:

- a. Company Name
- b. Product Name
- c. Part / Catalogue number
- d. Product description / main features
- e. Detailed technical specifications
- f. Remarks

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

Section 6 – Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
1.a	... (details of essential items)				
1.b	...				
2.	Optional items noted in the technical specification				
2.a	... (details of essential items)				
2.b	...				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty (3 year)				
6.	AMC 3 years beyond warranty				
7.	Cost of Insurance and Airfreight				
8.	CIP/CIF IISc, Bengaluru				

Any additional items

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total

Addressed to

The Chairperson,
Attn: Dr. Manukumara Manjappa
Instrumentation and Applied Physics,
Indian Institute of Science
Bangalore – 560012, India

Section 7 – Checklist

(This should be enclosed with technical bid- Part A)

The following items must be checked before the Bid is submitted:

1. Sealed Envelope “A”: Technical Bid

1. **Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:**
 - a. **Annexure 1: Bidders details**
 - b. **Annexure 2: Declaration regarding experience**
 - c. **Annexure 3: Declaration regarding clean track record**
 - d. **Annexure 4: Declaration for acceptance of terms and conditions**
 - e. **Annexure 5: Details of items quoted**
2. **Copy of this tender document duly signed by the authorized signatory on every page and sealed.**

2. Sealed Envelop “B”: Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.