

Global Tender

This is a Request for Quote (RFQ) from all vendors across the globe from for the supply of a Laser Machining System at CeNSE, IISc Bangalore.

Section 1 - Bid Schedule

1	Tender No	IISC-CeNSE-LM-01
2	Tender Date	16th October 2025
3	Item Description	Supply of a Laser Machining System at CeNSE, IISc Bangalore
4	Tender Type	Two bid system (i) Technical Bid (Part A) (ii) Commercial Bid (Part B)
5	Place of tender submission	Chairperson Office First Floor Centre for Nano Science and Engineering Indian Institute of Science, Bangalore 560012
6	Last Date & Time for submission of tender	06th November 2025
7	For further clarification	Prof. Saurabh Chandorkar Centre for Nano Science and Engineering Indian Institute of Science, Bangalore 560012 Email: saurabh@iisc.ac.in

Section 2 – Eligibility Criteria

Prequalification criteria:

1. The Bidder's firm should have existed for at least 3 years. Bidders should enclose a self-declaration.
2. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.
3. 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 must be given as per Annexure 3.
4. Only the Original Equipment Manufacturer or their authorized representatives across the globe shall participate in the bid.
5. The order will be placed only on the bidder who participated in the bid.

Section 3 – Terms and Conditions

A) Submission of Tender:

1. All documentation in the tender should be in English.
2. Tenders should be submitted in two envelopes (a two-bid system).
 - a. Technical Bid (Part-A) – Technical bid consisting of all technical details and checklist 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 instrument specifications 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 responses of previous columns, provide additional details, compare your solution with that of your competitors, or provide details as requested in the technical requirements table below.
- 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 the tender**, and other commercial terms and conditions.
3. The technical bid and price bid should be placed in **separate sealed covers**, superscribing on both the envelopes the tender description, 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 should reach the Chairperson Office, Centre for Nanoscience and Engineering, Indian Institute of Science, Bangalore – 560012, India, on or before the due date mentioned in the tender notice. If the due date is a holiday, the tender will be accepted 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., should be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document.

7. If the price is not quoted in the Commercial Bid as per the format provided in the tender document, the bid is liable to be rejected.
8. The purchase committee reserves the right to accept or reject any bid and annul the bidding process and reject all bids at any time prior to the award of the contract without thereby 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.

B) Cancellation of Tender:

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

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

C) Validity of the Offer:

The offer shall be valid 90 Days from the commercial bid's opening date.

D) Evaluation of Offer:

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria 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 the decision in this regard shall be binding on the bidders.
4. The award of the 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 the due date and time 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 construe that the BIDDER has accepted the clauses as of the tender, and no further claim will be entertained.
- 7. No revision of 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 the basic equipment along with accessories selected for installation, operation, preprocessing and post-processing, optional items, recommended spares, warranty, and annual maintenance contract. The purchase committee is looking for the most cost-effective solution for obtaining a new tool. Vendors are encouraged to propose all avenues, including but not limited to buy back of the existing tool, turnkey upgrade of existing tool or purchase of a new tool.

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 for a minimum period of 3 years (year-wise breakup value should be shown in the commercial bid). The vendor should include the cost of any spares expected to be needed during the warranty period, including electronics, subcomponents, and software. If the instrument is defective, it has to be replaced or rectified at the bidder's cost within 30 days from receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be extended.

G) Annual Maintenance Contract:

An annual maintenance contract for at least 3 years post-warranty should be provided as an optional item upon completion of the warranty period.

The AMC costs will not be considered for classifying the vendor's domestic nature (class 1 or class 2) (see eligibility criteria in section 2).

H) SPARES:

Vendors must provide a detailed list of spares and a user manual with a detailed Bill of Materials for all Parts. It should include the Spares Column with the Manufacturer part Number, Qty, and availability of stock after 3 Years.

I) Purchase Order:

The quantity of the items in the tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.

If the product and service quality is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

J) 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 the purchase order. The system should be delivered, installed, and made functional within 120 days from receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and the inspection of all the items and features/capabilities tested by the IISc, Bangalore. **For acceptance, the vendor must demonstrate the technical specifications mentioned in the tender.** After successful installation and inspection, the date of taking over of the 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 for the local facility technologists and users.

K) Payment Terms:

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

For quotes in foreign currency, the quote must be on a CIP Bangalore basis. The payment terms for the foreign currency quotes should be mentioned along with the commercial offer.

AMC costs (if ordered after completion of the warranty period) will be released on a half-yearly basis at the end of each six months, subject to satisfactory services.

L) Statutory Variation:

Any statutory increase in the taxes and duties subsequent to the 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 on to IISc, Bangalore.

M) Disputes and Jurisdiction:

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

N) General:

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

Section 4 – Technical Specifications

4.1) Automated Multi- Wavelength Laser Scribing, Ablation, and Cutting Station -Overall Specifications

Sl. No	Description	Required Specifications	Compliance (Yes / No)	Remarks
1	Wafer Material -Patterned and Unpatterned	Silicon wafers : <100>, <110>, <111> orientations		
2	SOI wafer with handle layer and functional layer	as one of <100>, <110> or <111> oriented.		
3	Other Wafer Materials Compliance			
3a		SiC		
3b		Quartz		
3c		Sapphire		
3d		ITO		
3f		Lithium Niobate		
3g		GaN		
4	Wafer Size	2", 3", 4",6",8"		
5	Wafer Thickness (Si or SOI or multiple bonded wafers)	300um to 1400um		
6	Kerf Width	50 um to 75um		
7	Cutting Speed	Variable and Controlled		
7a	Typical Speed for 550um 4" Silicon Wafer with total Kerf length of 15000mm	< 0.25 hour (i.e. > 17mm/s)		
8	Cutting Edge Roughness	< 50nm for above typical speed mentioned		
9	Debris Fall Back	Not on the Tool		
9a	Debris Removal	Air/Fluid Assisted Debris Removal to be provided		

4.2) Automated Micro Laser Scribing, Ablation, and Cutting Station- Overall Specifications

Sl. No	Description	Required Specifications	Compliance (Yes / No)	Remarks
1	Scribing/Cutting/Ablation Area	> 200X200mm		
2	Scribing/ Cutting Method	Motorised with confocal system		
3	Minimum Line Width	2um		
4	Repeatability	+/-1um		
4	Guidance	Laser		
5	Focusing	Motorised stepper Control		
6	X-Y Footage	400mm		
7	Integrated Galvano Scanning Unit with programmable speed	1000-1200mm/sec		
8	Scanning Speed (Stage) Programmable	4.5mm/sec		
9	Design Chamber	Closed		
10	Gas Inlet	Active Gas purging Option		
11	Imaging/Inspection/ Alignment Microscope	Yes		
12	Door Mechanism	Specify		
13	Working Height-Specify	1000-1100mm		
14	Resolution	1um		
15	Computer	Integrated Computer and display		
16	Operating Conditions	20-30°C, RH<65%		

4.2.1) Automated Multi- Wavelength Laser Scribing, Ablation, and Cutting Station-Utility Requirements

Sl. No	Description	Required Specifications	Compliance (Yes / No)	Remarks
1	Power Requirements			
2	Gas Inlet- Type and Flow Rate			
3	Cooling -- Type and Flow Rate			
5	Unit Dimensions (LXWXH)	1000X1000X1000		

4.3) Sample Handling Specifications

Sl. No	Description	Specifications	Compliance (Yes / No)	Remarks
1	Stage	Precision Automatic XYZ stage with Z-axis Automated		
2	Focus Z Axis and XY	Motorized servo motor controlled		
3	Resolution	1 Micron		
4	Positioning Accuracy	10 Micron with encoder		
5	Controller	Customised- XYZ Stepper controller Unit		
6	Position control and repeatability	Software based		

4.4) Imaging Specifications

Sl. No	Description	Specifications	Compliance (Yes / No)	Remarks
1	Sensor Type	20 MP CMOS		
2	Active Image Size	5.70mm x 4.28mm, 7.13mm diagonal		
3	Resolution	5472x3648(VXH)		
4	Pixel Size	2.4 x 2.4 um		
5	Color filter array	RGB Bayer pattern		
6	Shutter type:	Electronic rolling shutter(ERS)		
7	Frame rate	14 to 67 fps		
8	Exposure	Auto/Manual		
9	Pixel dynamic range	60 dB		
10	Data Interface	USB3.0		
11	Exposure Time μ S-Hour Specify	20 μ S-1Hour		
12	Functions Supported	Live image stitching, depth measurement,		

		coordinate saving, pattern overlay		
13	Larger Pixel Camera	3MP		

4.5) Optical System Specifications

Sl. No	Description	Specifications	Compliance (Yes / No)	Remarks
1	Equipment Type	Upright Confocal color corrected System		
2	Standard Objectives	a)10X(LWD) WD: 34 mm, Spot Size: 10-15 μ m b)2X (LWD) WD: 34 mm, Spot Size: 50-75 μ m		
3	Minimum Working Distance specify			

4.6)Laser Specifications

Sl. No	Description	Specifications	Compliance (Yes / No)	Remarks
1	Laser Type	1064nm Nd:YAG SWITCHED LASER		
2	Wavelength (nm)	1064		
3	Average power (W)	30W		
4	Ablation Spot Diameter	2 μ m		
5	Ablation line Marking width Min	2 μ m		
6	Laser Power and Frequency Control	Software		
7	Laser Safety	Specify		
8	Warm-up time (minutes)	Specify		
9	Cooling Type	Specify		
10	Operating temperature	10~35 ($^{\circ}$ C)		

4.7)System Software Specifications

Sl. No	Description	Specifications	Compliance (Yes / No)	Remarks
1	Fully Integrated	Control and Image Acquisition Software		
2	Laser control, scan path programming, focus control, stitching	As per 2)		
3	Compatible	with Windows 10/11, Intel i5 or higher, 16 GB RAM, SSD		
4	Additional Features	Depth Measurements Track saving		
4a	Additional Features	Multiple Position Saving, Live Image Addition, Subtraction and Enhancement		
5	Data Logging	To be provided with provisions for plots		

5)Others- Accessories & Warranty, AMC, Shipping etc etc

Sl. No	Description	Required Qty	Compliance (Yes / No)	Remarks
5.1	Optional Objectives 1)5X LWD (WD: 44 mm, Spot Size: 20 μ m) 2)20X LWD (WD: 29 mm, Spot Size: 5 μ m) 3)50X LWD (WD: 17 mm, Spot Size: 2 μ m)- To be Quoted Separately as part of Commercial Bid	1		
5.2	Cooling Base -Quote Separately as part of commercial bid	1#		
5.4	Alignment Jig for batch scribing- Quote Separately as part of commercial bid	1#		
5.5	Interconnecting Cables	1 Set		
5.6	Warranty	1 Year		
5.6a	Additional Warranty per year for 3 Years to be bid separately in the commercial bid	---		
5.7	IISc will not pay extra for	--		

	installation and training. The base price must include this			
5.8	Calibration & Safety Compliance Certificates to be provided as per International Standards	1 Set each		
5.9	AMC 3 Years after Warranty and separately quoted in the commercial bid	-----		
5.10	Shipping:	Cost of shipping up to IISc should be included in the commercial bid		
Sl. No	Description	Required Qty	Compliance (Yes / No)	Remarks
5.11	Installation, commissioning & Training:	The supplier shall install & commission, also provide training at IISC & should be part of the cost in commercial bid		
5.12	Tool Acceptance Tests	Demonstration of typical cutting speed of 4" <100> Si wafer of thickness 550um, 2" <111> Si wafer of thickness 1mm and 4" <100> thickness 1.3mm. Kerf width of 50nm.		
		Demonstration of wall roughness specification (50nm). Test will be carried out as an average of wall roughness measured using SEM with cross-sections in 5 locations of wafer.		
5.12.1	Scribing Capability	Demonstrate the Scribing features with sample text/images		
5.13	Operation & Maintenance:	Operational and Maintenance Manuals, Spares, detailed drawings are a must (hard copy & soft copy both)		

5.14	Online support:	System Online Support capability for online diagnostics from a remote location in case of tool problems free of cost		
5.15	Supply of spares & Maintenance parts for 10 years	Supplier to be provide the cost of Spares Separately in commercial bid		
5.16	References: Similar Equipment installed in India & Year of installation	Reference of 3 companies with address and contact details to be provided		

Notes:-

1) Compliance to be provided for each line item

2)Additonal Remarks/Comments column to be filled as needed.

Section 5- Technical Bid

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

**The Chairperson,
Attn: Prof. Saurabh Chandorkar
Centre for Nano Science and Engineering
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 an 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,
Centre for Nanoscience and Engineering,
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No: XXXXXXXXX

Dated: XXXXX

Dear Sir/Madam

I've carefully reviewed the Terms & Conditions in the above-referred tender. I hereby declare that my company/firm has -----years of experience in supplying and installing the proposed equipment.

(Signature of the Bidder)

Printed Name

Designation, Seal Date:

Annexure-3:

Declaration regarding track record

To,
The Chairperson,
Centre for Nano Science and Engineering
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No: XXXXXXXX
Dated: XXXXX

Dear Sir/Madam,

I've carefully reviewed the Terms & Conditions 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 a 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 the 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,
Centre for Nano Science and Engineering
Indian Institute of Science,
Bangalore – 560012, India

Ref: Tender No: XXXXXX
Dated: XXXX

Dear Sir/Madam,

I've carefully reviewed the Terms & Conditions 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 the technical bid.
3. Bidders should clearly indicate compliance or non-compliance with 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:

Addressed to

The Chairperson,
Attn: Prof. Saurabh Chandorkar
Centre for Nano Science and Engineering Indian
Institute of Science
Bangalore – 560012, India

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 years)				
6.	AMC 3 years beyond warranty				

Any additional items such as Spares and Hardware/PCB'S/Other items Likely to going Obsolete after the next 3 Years

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

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 Envelope “B”: Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: **Technical Bid (Envelope A) and Commercial Bid (Envelope B)** superscribing on both the envelopes with, Tender description, 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.

*****END OF DOCUMENT*****