

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032

NIT No. IACS-G/SSPDD/2022-23/70

Date: 13.02.2023

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for **Maskless Photo Lithography System**.

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of **Central Scientific Services, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

Tender Notice No.	NIT No. : IACS-G/SSPSDD/2022-23/70 Date: 13.02.2023
Last date and time of submitting tender	01.03.2023, 12.00 noon
Date, time and venue of Pre-bid meeting to discuss technical specification	N/A
Date, time and venue of opening technical bid of the tender	01.03.2023, 04.00 pm, IACS
Date, time and venue of opening the price bid of the tender	Will be communicated letter
Contact	Email: sspdd@iacs.res.in Tel

*If you wish to participate in the online Pre-bid meeting, please write a mail to the email account (@iacs.res.in) on behalf of your company so that the required link can be sent prior to the online meeting.

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument and thereafter the price bids of only technically qualified bidders will be opened.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly super scribed as 'TECHNICAL BID' on the outer cover of the envelop as already detailed above. It should be clearly mentioned on the envelope as "Technical Specification for high-end physical memory based standalone server".

Technical Specification for Maskless Photo Lithography System

Features	Specification
Maskless Photo Lithography	The equipment should be able to perform photolithography without a conventional physical mask. The purpose is to pattern photoresists (g, h & i line) for fabricating microstructures. The fundamental nature of technology used in the equipment can be different. However, equipment should be able to expose and pattern photoresists coated on substrate wafers. The vendors must show the capability of the equipment they quote by providing scientific or other relevant documents showing images at highest resolution and details of microstructures and micro-channels mentioning the scale bar fabricated using their equipment. The basic technology of the equipment may vary; however, the equipment must fulfil our requirement. The vendors must demonstrate the fabrication of a design as per standard techniques during the installation.
Type and size of equipment	Table-top system with cleanroom compatibility.
Exposure area	65 mm x 65 mm or more.
Substrate Size	up to 4"
Substrate Height/thickness	up to 20 mm
Minimum feature size	1.5 μm or smaller
Objectives for writing resolutions	3 μm / 6 μm / 15 μm
Option for Objectives	10X and 1 X
Writing speed	5 mm ² /min or better with 10X. Optional 75 mm ² /min is the writing speed with 1X

Alignment accuracy	2 μm or better (for 1 cm^2 area)
Illumination wavelength	385 nm or lower – should be suitable for SU8 and also for AZ15 series photoresists.
Light Source:	LED or Laser
Feedback camera	Should be coupled with the secondary light source for direct overlay of the design.
Motorized XY stage	• Motors: stepper • Working range: 65 mm x 65 mm or better • Resolution: 0.5μm or better • Repeatability: 2 μm or better Maximum working speed: 2 mm/s or better
Motorized Z	• Motors: stepper • Working range: 25 mm or better • Resolution: 0.625 μm or better • Repeatability: 2 μm or better Maximum working speed: 2.5 mm/s or better
Software	Must be ready for external interfacing and control.
Mask design	Suitable software.
Computer	Major specification. Processor: i7 or better RAM 16 GB or more Monitor 21.5” FHD or better Windows operating system with necessary accessories such as mouse, keyboard, cables etc.
Local supply of chemical for lithographic process	Photoresist AZ1505 (Quantity: 250ml), AZ1512HS (Quantity: 250ml), AZ MIF 326 Developer (Quantity: 5 liters), SU-8 for low thickness (~3 μm) (Quantity: 500ml) and high thickness (~50 μm) (Quantity: 500 ml) with corresponding developer solution (Quantity: 4 liters).
Warranty	At least 1 Year Warranty from the date of installation
Installation, Demonstration and Training	The vendor must install the equipment, demonstrate the fabrication of a structure, and train a group of users.
Prior successful installation	The vendor should have prior successful installation of similar systems at premier Indian institutes like IITs and IISERs. We may seek feedback from the existing users during the technical evaluations.

Warranty: 1 year.

Service Facility: Supplier should mention the details of their service setup in India and man powers in India, preferably Kolkata.

Technical compliance chart should be provided following format,

Sr. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is not provided following the above format.

2. PRICE BID

The financial bid indicating (item-wise, if required) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly superscribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and the corresponding manufacturer/exclusive distributor/vendors will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted on INR (The Indian Rupee).

3. BID SECURITY:Declaration in terms of F.9/4/2020-PPD dated 12.11.2020

a. An Account payee Demand Draft/Pay Order for Rs. 13000.00 (Thirteen thousand only) drawn in favor of "Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN0000093, MICR Code: 700002048)" is to be furnished by the bidders except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department. Bid Security money or Earnest Money Deposit (EMD) may also be deposited in Bank Guarantee or any other acceptable form.

b. The Demand Draft for the Bid-Security should have at least 90 (ninety) days validity period from the date of opening of the bids.

c. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

4. PERFORMANCE SECURITY:

- An Account Payee Demand Draft of 3% of the order value in the name of “Indian Association for the Cultivation of Science” is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money.

GENERAL INSTRUCTIONS

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.
2. The tender should accompany a compliance chart.
3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally visit the website (www.iacs.res.in/tender) for any amendment.
5. 100% payment after delivery or 90% after delivery in case of LC.
6. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
7. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.
8. The model number, make and a printed literature of the product should be submitted positively.
9. Proposed delivery schedule should be mentioned clearly. Delivery of the materials to the PI should be within 60 days from the date of purchase order.
10. Manufacturers / exclusive distributors / vendors should have history of supplying this type of instruments to this or other scientific organizations. Availability of a list in this regard would be preferred.
11. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
12. Guarantee certificate, users' manuals etc. are to be handed over to the user after successful commissioning of the system.
13. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
14. In case of any dispute, the decision of IACS authority shall be final and bidding on the bidders.
15. For any clarification regarding technical specifications, information etc., please send your queries to Professor (@iacs.res.in).

16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

17. The OEM should have a service center of its own in East for more than 5-10 Years.

Registrar