

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

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

NIT No: IACS/CAMNP/2023-24/52

Date:11.01.2024

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturers/exclusive distributors/vendors for **Photonics Multichannel Analyzer and EQE Measurement 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 envelope, 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 the **Registrar, 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/CAMNP/2023-24/52	Date:11.01.2024
Last date and time of submitting tender	30/Jan/2024, within 12.00 Noon	
Pre-bid meeting(date, time & place) to discuss technical specification	15/Jan/2024, 2.30 PM (Room No. M214, IACS)	
Date and time of opening tender (Technical Bids)	30/Jan/2024, 02.30 PM	
Place of opening tender	Room No. M214, IACS	
Date and time of 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.	
Contact	Email: camnp@iacs.res.in Tel.+91 33 2473 4971 [Ext 1733]	

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.

Quotations received incomplete or beyond the stipulated time will be summarily rejected.

Bidders should submit their past experience for supplying and successful installation of similar units to other research Institutes/Universities/other organizations in India and abroad. Please provide documentary proofs of such successful installation and supportive documents that the instruments are running successfully.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly superscribed as 'TECHNICAL BID' on the outer cover of the envelop as already detailed above. This has two parts, "Technical Bid-A" which is related to the **Photonics Multichannel Analyzer** and other one is "Technical Bid-B" which is associated to **EQE Measurement System**. The vendor can quote both A and B together, but both should be compatible. Technical bids of both A and B will be considered together for examining the technical specifications.

Technical-A: Technical Specification for Photonics Multichannel Analyzer:

Specification:

1. The Photo Detector should have a thermoelectrically cooled, BT-CCD Linear Image Sensor to provide high sensitivity and lower noise.
2. Wavelength: 350 nm to 1100 nm
3. Wavelength resolution (FWHM): < 2.5nm or better
4. Wavelength accuracy: < ± 0.75 nm or better
5. Exposure time (internal trigger mode): 20ms to 60s
6. Range of measurement for luminous flux: 0.00013lm to 0.12lm with an emission area 2mm and white light
7. Number of photosensitive device channels: 1024ch or higher
8. Pixel size: $24\mu\text{m} \times 2928\mu\text{m}$ or better
9. Device cooling temperature: -15°C
10. Read-out noise: 16 electrons or better
11. Dark current: 32 electrons/scan (-15°C ; 20 ms)
12. AD resolution: 16 bit or better
13. Spectrograph: Czerny-Turner type
14. Spectrograph F number: 4
15. External trigger input: TTL level/ High impedance
16. Interface: USB 2.0
17. The spectrometer, photodetector and power supply
18. Power supply: AC 100 V to AC 240 V, 50 Hz/ 60 Hz
19. Halogen lamp for excitation and absorption measurements should be included.
20. Warranty : Three Years. This should be year wise.

Technical Bid-B: EQE measurement system with software

1. Integration sphere:
 - Inside Diameter: 3.3 inch
 - Reflective Material: Spectralon
2. Light shield adapter:

Should be provided a Light shield Adapter for blocking off the port when measuring external quantum efficiency.

3. Integration sphere adapter:

Should be included an Integration sphere adapter for self-absorption correction.

4. Required Fiber Optical Bundles: Bundled fiber Φ 12mm SUS tube, Fiber Length: 1.5 m

Fiber receiving area: Φ 1 mm

5. Simple Crocodile Clip Type Sample Holder:

Should be included general-purpose sample holder for alligator clips for EL External Quantum Efficiency Measurement Source. It should come with a light shielding cover.

6. Software:

The following routines should be available with the software.

- Current density / EQE
- Current density / Luminous efficiency
- Current density / Power efficiency
- Current density / Voltage
- Current density / Dominant Wavelength
- Current density / Chromaticity coordinates
- Current density / Excitation purity
- Current / External Differential quantum efficiency
- Time / current (voltage)
- Time / Emission spectrum
- Wavelength / Intensity

7. All the accessories provided should be compatible for the Photonics Multichannel Analyzer as specified in Technical Section -A.

8. Warranty three years (Year wise splitting may be provided)

Optional: Compatible Keithley Source Meter with USB interface

Delivery and Taxes:

- Door delivery
- All Custom duty and service taxes must be paid by the respective company.

A compliance table (see below) must be prepared and submitted along with the technical bid.

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) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly superscribed as 'PRICE BID-A' and 'PRICE BID-B' on the outer cover of the envelope as already detailed above. Price bids of only technically qualified bidders will be opened and the 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 Door Delivery basis.

3. BID SECURITY:

An Account payee Demand Draft of any of the Commercial Banks **for Rs. 1,20,000/- (Rupees One Lakh only) drawn** in favour of "Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN000093, MICR Code: 700002048)" is to be furnished by the bidders alongwith Technical Bid, except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation 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

Alternatively, the bidder shall have the option to furnish EMD in the form of Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks. The Bid-Security should have at least 90 (ninety) days validity period beyond the final bid validity period.

In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders which will carry no interest.

4. PERFORMANCE SECURITY:

An Account Payee Demand Draft on any commercial bank of India or Bank Guarantee (BG) of any Commercial Bank preferably located at Kolkata of 10% 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.

5. TERMS OF PAYMENT:

Payment will be made after delivery.

6. 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 to visit the website (www.iacs.res.in/tender) for any amendment.
5. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.

6. 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.
7. The model number, make and a printed literature of the product should be submitted positively.
8. Proposed delivery schedule should be mentioned clearly.
9. 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.
10. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
11. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
12. 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.
13. In case of any dispute, the decision of IACS authority shall be final and binding on the bidders.
14. In case of any litigation the matter will be dealt within the jurisdiction of the High Court of Calcutta only
15. For any clarification regarding technical specifications, information etc., please send your queries to Prof. Narayan Pradhan (camnp@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