

# INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

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

**NIT No. : IACS/SAIS/2021-22/77**

**Date: 07/09/2021**

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for Integrating Sphere with multiple functionality compatible for solid state electroluminescence and external quantum efficiency (EQE) measurements of LED devices.

Part-I (Technical Bid) of the tender should contain technical specifications fulfilling the complacence of the 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 separate sealed envelopes, distinctly marked accordingly and both to be put inside another single envelop. All the envelops 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.	<b>NIT No. IACS/SAIS/2021-22/77</b> <b>Date: 07.09.2021</b>
Last date and time of submitting tender	07.10.2021 at 3.00pm
Pre-bid meeting (date, time & place) to discuss technical specification	24.09.2021 at 3.30 pm at the office of Prof. S. Acharya in the hybrid mode.
Date and time of opening tender	08.10.2021 at 3.00pm
Place of opening tender	The office of Dr. Malik, PSU
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: <a href="mailto:camsa2@iacs.res.in">camsa2@iacs.res.in</a> Tel.+91 33 2473 4971 [Ext.: 11044]

The technical bids will be opened first to judge/evaluate and complacence of 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 equipment 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 envelope as already detailed above. **It should be clearly mentioned on the envelope as "Integrating Sphere with multiple functionality compatible for solid state electroluminescence and external quantum efficiency (EQE) measurements of LED devices"**.

**Technical Specification for Integrating Sphere with multiple functionality compatible for solid state electroluminescence and external quantum efficiency (EQE) measurements of LED device are as follows:**

The integrating sphere with multiple functionality system should be able to measure a) Luminance, b) Electroluminescence spectra, c) Chromaticity, d) External quantum efficiency and e) Power efficiency etc.

(i) Integrating sphere of 3.3 inches or more, with light shield adaptor, proper sample holding adaptor and self-absorption correction.

(ii) Light source of wavelength of 380-780 nm for back correction.

(iii) Detector with RoHS conform (CCD type): 350-1100 nm with resolution < 3.0 nm.

(iv) Number of photosensitive device channels should be more than 1000 and CCD detector is preferred.

(v) Working wavelength should be in the visible wavelength ranging from 380 nm to 780nm.

(vi) Sample holder with external quantum yield measurement as well as EL external quantum efficiency measurement. Separate option should be provided for Simple type and Pin type holder.

(vii) The EQE measurement system should be compatible for electroluminescence measurement of prepared LED with the source meter.

(ix) Software for the interface facilities with the computer should be capable to measure EQE. Software is desired to handle more functionalities (Current density /EQE; Current density /Luminous efficiency (cd/A); Current density /Power efficiency; Current density /Voltage; Current density /Dominant wavelength; Current density /Chromatically coordinates; Current density /Excitation purity; Time / Current (voltage), Time / Emission Spectrum and Wavelength / Intensity)

x) System should be capable of displaying several variables (Minimum Current, Minimum Voltage, Maximum Current, Maximum Voltage, Step Current, Step Voltage).

Additionally, the technical committee recommends to observe the following:

xi) Source-measure unit to be provided. The unit is optional.

(xii) Warranty for 2 years from the date of installation.

(xiii) Installation proof, user list with contact details should be provided to whom the vendor supplied the similar instrument.

(xiv) Installation, demonstration, personnel training and test measurements after sales should be performed at the buyer's sight following which the installation certificate will be signed.

(xv) Acceptance criteria: on successful installation with satisfactory performance of the equipment at the buyer's sight.

(xvi) Manuals (operation, maintenance and trouble shoots etc) and calibration certificates should be provided.

(xvii) Comprehensive annual maintenance cost (AMC) for the above items should be mentioned.

Servicing facility within India is a must while service engineer stationed in India will be preferred.

A list of other places where the instrument has been installed should also be provided.

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 super scribed 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 they 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 **CIF Kolkata** and also **FOB basis**.

## 3. BID SECURITY DECLARATION:

a. An Account payee Demand Draft/Pay Order of Nationalized Bank for **Rs. 1,00,000.00** (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 along with Technical Bid except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department, as Bid Security money or Earnest Money Deposit (EMD). Alternatively, the Bidder shall have the option to furnish the EMD in the format of Bank Guarantee (BG).

b. The Demand Draft for the Bid-Security should have at least about 90 (ninety) days validity period 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 on any nationalized bank of India 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.

## 5. TERMS OF PAYMENT :

Payment will be made through irrevocable Letter of Credit in two installments. 90% of the money will be released after successful installation of the instrument. Remaining 10% will be released after successful installation of the instrument as well as training and successful operation of the equipment.

## 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](http://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 or as notified on the institute website.
13. In case of any dispute, the decision of IACS authority shall be final and bidding on the bidders.
14. For any clarification regarding technical specifications, information etc., please send your queries to Prof. S. ACHARYA ([camsa2@iacs.res.in](mailto:camsa2@iacs.res.in)). The subject line of the mail should specify the tender.
15. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

**Acting Registrar**