

**INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE**  
**2A & 2B Raja S.C.Mullick Road Jadavpur, Kolkata 700032**

**Tender Notice No.: BC/DKS/DST/SB/SO-BB-101/13/14/59 dated: 8.12.2014**

***Sub: Avalanche Photo diode (APD) capable of counting single photon with accessories***

Sealed tender in two bids system (**Technical Bid & Financial bid**) is invited from bonafide, resourceful and eligible manufacturers/exclusive distributors for supply and installation of ***Avalanche Photo diode (APD) capable of counting single photon with accessories.***

Part I (Technical Bid) of the tender should contain technical details and commercial terms and conditions and Part II (Price Bid) should indicate group-wise price as mentioned in the Technical Bid where applicable. The Technical Bid and Price bid are to be submitted in two separately sealed envelopes distinctly marked accordingly and both to be put inside another envelope, which should be sealed and super scribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads. Complete tender bids should reach the office of the **Department of Biological Chemistry, Indian Association for the Cultivation of Science, 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata 700032** or on before the scheduled date & time specified below.

<b>Tender Notice Number</b>	<b>BC/DKS/DST/SB/SO-BB-101/13/14/59 dated: 8.12.2014</b>
<b>Date and time of Pre-bid meeting</b>	<b>16<sup>th</sup> December, 2014 at 3.00 P.M.</b>
<b>Last date and time of submitting tender</b>	<b>1<sup>st</sup> January, 2015 at 12.30 P.M.</b>
<b>Date and time of opening tender</b>	<b>1<sup>st</sup> January, 2015 at 3.30 P.M.</b>
<b>Place of Opening Tender</b>	<b>at JC Bose Meeting Room</b>
<b>Contact</b>	<b>bcdks @iacs.res.in</b>

The technical bids will be opened first to evaluate the technical specifications of the equipment. Thereafter, the Price bids of only technically qualified bidders will be opened. The date of opening the Price Bids will be intimated to the short-listed bidders at their contact addresses. The rest of the bids will be rejected.

The technical specification committee recommended *Avalanche Photo diode (APD) capable of counting single photon* with appropriate electronics and software and accessories. With following technical specification

**Technical Specifications:**

**A) *Avalanche Photo diode (APD) capable of counting single photon***

- A1) Dark Counts < 200 Hz
- A2) Detector Sizes 50 to 100 microns
- A3) Detector Type : Si Avalanche Photodetector
- A4) Wavelength Range: 400-800 nm

55) Photon detection probability > 30% at 500 nm

A6) Dead Time : < 50 ns

A7) Software and electronic hardware should be included for photon counting in following mode

- manual operation
- Counting for a specified number of "Time Bins"
- starting and stopping the counter by an external trigger

A8) should have following features

a) Active Quenching b) Temperature Stabilization (< 0.1 K) c) USB Interface d) Pulse Output e) TTL Gating/Trigger Input f) Compact Size (less than): 100 mm x 100 mm x 50 mm e) all **Metric** system

A9) Appropriate power supply

### **Technical Specifications of accessories**

#### **B) Electronic Optical Beam Shutter (Metric system) and its Controller**

B1) Should be controllable with TTL pulse; with ~10' Long Cable; Aperture 1/2" or more;

B2) Time delay between the application of TTL voltage and the opening of the shutter, should be less than 20 msec

B3) Time delay between the removal of TTL voltage and the closing of the shutter, should be less than 20 msec

B4) Should be supplied with programmable electronic controller, compatible with the specification mentioned above

#### **C) 2D Galvo System with Accessories (Metric system)**

C1) Maximum Beam Diameter~ 5mm; 2-Axis System; Wavelength Range 400nm to 750 nm

C2) Motor Linearity > 99.9 % ; Repeatability < 15  $\mu$ rad ; Scan Angle > 12 deg ; Small Angle Step Response < 300  $\mu$ s

C3) Should include Power Supply, Mirror Heatsink, and Driver Card and its Cover, Protected Silver Mirror Coating

C4) Should include Optically Encoded Mirror Position and Analog Control Circuit (Servo Driver) with Current Damping and Error Limiter

#### **D) FC/PC Fiber Adapter Cap with Internal Thread SM1 (1.035"-40)**

#### **E) FC/PC Fiber Adapter Plate with External Thread SM1 (1.035"-40)**

#### **F) 1" (diameter) 10:90 (R:T) Plate Beamsplitter, 400-700 nm,**

#### **G) 1" (diameter) 30:70 (R:T) Plate Beamsplitter, 400 - 700 nm,**

### **Important notes:**

i) Vendor should quote rates involved, if any, for the Optional Items/services mentioned separately.

ii) Bidder providing misleading or wrong information will be disqualified

iii) All technical claims of the Bidder should be supported by product catalogue, public website of the manufacture.

iv) The Indian Agents desiring to quote on behalf of their foreign principals must have valid registration with the Central Purchase Organization (eg. DGS&D) as provided in Rule 143 of general Financial rules, 2005

## **B). FINANCIAL BID**

The financial bid should be super scribed as “**Finance Bid**” on the outer cover of the envelope.

**1. 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" on the outer cover of the envelope as already detailed above. The price bids of only technically qualified bidders will be opened and they will be intimated the date and time of opening of price bids at their email id-(s). Rest of the bids will stand rejected.

**2. Price:** Price to be quoted both on FOB / CIF/EX WORKS basis for foreign currency or in Indian currency.

Name of the particular port from where our authorized forwarder will lift the consignment must be mentioned clearly with FOBCIF/EX WORKS price.

**3. Bid Security (EMD):** An Account Payee Demand Draft for Rs. 24,000/-(Rupees twenty four thousand) drawn in favour of "Indian Association for the Cultivation of Science" payable at Kolkata is to be furnished by the bidders, as Bid Security money or Earnest Money Deposit (EMD) with the tender.

**4.** The Demand Draft for the Bid-Security money should have at least 45 (forty five) days validity period after the opening of the Bids.

**5.** In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders. Bid security money to the successful bidder will be refunded on receipt of the Performance security money.

## **6. Performance Security:**

An Account Payee Demand Draft for an amount of 10% of the order value drawn in favor of "Indian Association for the Cultivation of Science" payable at Kolkata is to be furnished by the successful bidder as Performance security. Performance security money would be released by IACS after a period of 60 days from the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money will be refunded to successful bidder on receipt of the Performance security money.

## **(C) General Instructions:**

**1.** Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.

**2.** “*Vibration Isolation Table top*” should clearly be written on the envelope.

**3.** 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 only.

Prospective bidders are advised to occasionally visit the website ([www.iacs.res.in/tender](http://www.iacs.res.in/tender)) for any amendment.

**4. Payment Terms:** All possible terms of payment should be mentioned.

**5. Warranty:** Equipment should be offered with standard warranty followed by 48 months Annual Maintenance Contract (AMC). The vendor should quote the charges for 48 months AMC.

**6. Installation/Demonstration /Application Training at site:** Free of cost by the supplier within 6 months of arrival.

**7. User list:** The supplier should provide a list of current users (with contact no, Email address etc) for the quoted item in India.

**8. Service facility:** Supplier should mention their details of service setup and Manpower in Kolkata who are responsible for after sales support. Response time should be within 24 hours.

**9.** The tender submitted shall remain valid at least for three months from the date of opening the tender. Validity beyond three months from the date of opening of the tender shall be by mutual consent

**10.** The tender should accompany a compliance chart. A technical compliance chart should also be provided in the following format:

**A compliance chart of Serial Number under the TECHNICAL BID Specification should be provided**

**11.** The rate should be inclusive of all taxes, transportation etc. Nothing extra will be paid in addition to the quoted rate. The taxes, etc. should be shown separately in the Price Bid.

**12.** The model number, make, and a printed literature of the product shall be submitted positively.

**13.** Proposed delivery schedule should be mentioned clearly.

**14.** Manufacturers/exclusive distributors/vendors should have history of supplying this type of instrument to this or other Scientific Organization.

**15.** Authorized Dealership Certificate is must in case of principal manufacturing company is not quoting directly.

**16.** Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.

**17.** Incomplete tenders will be summarily rejected.

**18.** For any clarification regarding technical specifications, etc. please send your queries to "**Dr. Deepak Kumar Sinha: [bcdks@iacs.res.in](mailto:bcdks@iacs.res.in)**"

**19.** In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of technical bids will be the following working day at the appointed time.

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

**21. Acceptance of Tender:** IACS authority does not bind itself to accept the lowest tender and reserves the right to reject any or all the tenders received without assigning any reason thereof.

**REGISTRAR**