

Department Optoelectronics, University of Kerala, Kariavattom,
Thiruvananthapuram, Kerala, India - 695581

TENDER -Pl.A1/Hall Measurement

Dated 15.03.2017

E-Tender Notice

Department of Optoelectronics, University of Kerala, Kariavattom, invites open tender through e-Procurement (two cover system) from the Original Equipment Manufacturers or their Authorised Dealers for the **Hall measurement System**

Last date and time for submission of tender online	25.03.2017 at 5.30 p.m
Last date and time for submission of tender offline	25.03.2017 at 5.30 p.m
Date and time of opening of tender	30.03.2017 at 11 a.m
Hard copies of the sealed tenders to be submitted to the office of	The Registrar, University of Kerala,Senate House campus, Palayam Trivandrum- 695 034, Kerala Tel: +91-471-2305631, 2386202 (O) e-mail: regrku@gmail.com
For technical details contact	Dr. V.P. Mahadevan Pillai, Head,Department of Optoelectronics, e-mail: vpmpillai9@gmail.com Phone No. 9400946909

For further details logon to www.etenders.kerala.gov.in

TECHNICAL SPECIFICATIONS of Hall measurement System

Hall measurement System should be able to do

- N/P type semiconductor identification
 - Bulk/sheet carrier concentration
 - Resistivity
 - Mobility Hall coefficient
 - Conductivity
 - Magneto-resistance and
 - Ratio of vertical/horizontal resistance value.
1. **Windows based software and constant current source capable to analyze the data.**
 2. **System should be competent with Electrical specification (all meters matching to below specifications should be supplied):**
 - Input current : $\leq 5 \text{ nA}$ to $\geq 15 \text{ mA}$
 - Resistivity : $\leq 10^{-4}$ to $\geq 10^7 \Omega\text{cm}$
 - Carrier concentration: $\leq 10^7$ to $\geq 10^{21} / \text{cm}^3$
 - Mobility : $\leq 1 \sim \geq 10^7 / \text{cm}^2/\text{Volt. sec}$
 3. **Magnetic flux density part specification:**
 - Magnet:
Type Permanent / electromagnet - 1 Tesla or higher (magnetic flux density +/- 0.05T or better).
 - PC control software for moving magnet automatically/control.
 - Automated moving magnet on the rail.
 4. **Variable temp control system:**
 - To automatically/control for temperature variation
 - Measurable temp range: essentially needed to operate with variable temperature from 80K to 350K using liquid nitrogen and cryostat
 - Accuracy +/- 0.5K.
 5. **Indium Tin (InSn) compound for sample bonding 100gms. 95% Indium / 5% Tin.**
 6. **LN2 Transfer Dewar with minimum 20 liters**
 7. **Sample holder: (4 Nos)**
 - gold coated copper sample holder
 - Spring loaded clamps pins on four point to avoid sample damage
 - Sample should NOT be in the direct contact with LN2
 - Mounting samples sizes 5mm X 5mm to 15 mm X 15 mm or larger and thickness less than 2 mm.

8. **Manual:** One set of operating manual and service manual (in English) should be provided with the equipment
9. **Training:** Onsite installation and training must be provided.
10. **Warranty:** Not less than three years

General Conditions:

1. The tender shall be submitted in the two bid viz. Technical Bid and Financial Bid. Only those qualified in technical bid will be eligible for participating in financial bid. A presentation regarding the technical specification and item to be supplied shall be done before the technical evaluation committee if requested.
2. The bidder should be a manufacturer or their dealer specifically authorized by the manufacturer to quote on their behalf for this tender as per Manufacturer Authorization From and Indian agents of foreign principals, if any, who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the “Technical Specification”. Such equipment must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening.
3. **Compliance Statement:** Along with the technical details provide a tabular column indicating whether the equipment quoted by you meets the specifications by indicating 'YES' or 'NO'. If 'YES', support the claim by providing original brochures. **Venders should provide clear brochures/data sheets about the equipment and it's working. Also include adequate proof for the claim regarding the performance.**
4. **Reference:** Names of Institutes with contact person and telephone/ email where similar equipment supplied by you in India [Preferably South India] shall be mentioned in the bid.

5. Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.
6. The price should be inclusive of all taxes, duties, transportation, insurance, installation etc. Nothing extra will be paid in addition to the quoted rate. Any amount in Indian rupees for installation, commission, labour, spares, service etc shall be entered in item 2 of BoQ.
7. Payment Terms: 90% payment shall be made through irrevocable LC on presentation of complete and clear shipping documents and balance 10% of the amount shall be released after the receipt, installation commissioning and acceptance of the equipment.
8. Validity of tender: Tender submitted shall remain valid at least for 120 days from the date of opening the tender. Validity beyond 120 days, from the date of opening of the tender shall be by mutual consent.
9. **Every tenderer should submit an Earnest Money Deposit (EMD) or equivalent Bank Guarantee valid upto the installation of the equipment.**
10. **Every tenderer should submit Tender fee of Rs.....**
11. Delivery and installation: Proposed delivery schedule should be mentioned clearly. Delivery and installation and training (one week) should be made at the Department of Optoelectronics, University of Kerala, Kariavattom campus, Trivandrum without extra cost. University of Kerala will provide customs duty exemption certificates if required.
12. Service facility: Supplier should mention their details of service setup and manpower in Thiruvananthapuram who are responsible for after sales support.
13. The model number, make, and a printed literature of the product shall submit positively.

14. In case of any dispute, the decision of the University authority shall be final and binding on the bidders.
15. The undersigned reserves the right to reject any or all of the tenders received without assigning any reason thereof.
16. If any component is found to be defective during the warranty period, the vendor has to replace the defective item immediately at their own cost.

Documents to be Uploaded

- 1 Signed Compliance Matrix
- 2 Detailed Technical Brochure
- 3 Under taking of support for next 10 Years
- 4 BoQ
- 5 DD/Hard copy of Bank Guarantee if opted

**The Registrar,
University of Kerala,
Senate House campus, Palayam , Trivandrum- 695 034, Kerala.**