

Detailed Specifications of Global Tender Notice No: 12/2015

S. NO.	TENDER NO.	BRIEF DETAILS OF ITEM(S)	PAGE NOS.
1.	14-VII/BG(2504)15-PB/T-97	Hall Measurement Unit	2

Hall Measurement System

The Hall measurement system should be a complete unit capable of measuring Hall-related parameters (calculation of Hall coefficient, mobility and carrier concentration) in vacuum (15K-1000K) and consist of a magnet assembly, control unit, computer, chiller, vacuum unit alongwith UPS power back up, associated hardware cables/connector/interfaces and software and other accessories.

Specifications

Magnetic field : 4 inch diameter electromagnet with power supply ,1.5 Tesla or higher (2-inch pole caps with an air gap of 1 inch) (Provision for Field reversal) at room temperature. Variable pole gap.
Carrier Mobility range : 1 to 10⁶ cm²/Vs or better
Carrier concentration : 10³ to 10²³ cm⁻³ or better
Resistivity : 10⁻⁵ to 10⁵ Ω-cm or better
Sample resistance measurement : 0.5 m Ω to 100 MΩ or better
Variable temp.control : 15K to 1000K or better, including all accessories
Sample Dimensions : To hold upto 10 x 10 x 3 mm sample, along with mounting kits

- Different sample holders for measurement and compatible to be with our specifications.
- Closed Cycle Refrigerator for low temperature measurements (15-400K or better)
- Suitable pumping & measurement facility to run Hall measurement system.
- Magnetic field calibration kit (including Gauss meter and probe etc.)
- I-V measurement facility
- Computer with monitor, laser color printer along with interface cables and complete software for measurement and calculations. The software should provide quantitative measurement options and display parameters such as Hall coefficient, mobility, carrier concentration, conductivity as a function of temperature.
- Compatible Chiller and UPS for power backup (minimum 30 minutes).
- Installation and demonstration and Training of the equipment at the customer site should be included.
- Input power rating to be compatible with that available for India.
- **Warranty**: Minimum one year.

Optional Items

- AC field Hall measurement option including accessories
- Magneto-resistance measurement facility
- Provision for low & high resistance measurement.
- Consumables for trouble free operation for 5 years.
