

**Indian Institute of Technology Delhi**  
Nanoscale Research Facility (NRF), IIT Delhi  
Hauz Khas, New Delhi-110016, INDIA

**NOTICE INVITING QUOTATION**

**Date: 10-09-2012**

<b>Due date: 26-09-2012</b>
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**NIQ Ref. No.: IITD/NRF/2012-13/DC-Probe-Station**

**General description: DC Probe Station with four micropositioners and a hot chuck** for performing current-voltage (I-V) and capacitance-voltage (C-V) measurements on various devices such as diodes and transistors.

**TECHNICAL SPECIFICATIONS for the DC Probe Station:**

<p><b>1. Substrate Chuck:</b> A Vacuum chuck, along with suitable vacuum pump, with X-Y movement capability of 100 mm x 100 mm or more. Z movement should be adjustable up to 10mm and with 3mm contact/separation stroke. Theta: 360 degrees. Planarity of chuck should be 5 <math>\mu</math>m or lower.</p>
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<p><b>2. Hot chuck:</b> A hot chuck should also be provided and the temperature of this chuck should be variable from RT to 300°C. The temperature stability and resolution of the chuck should be <math>\leq 1^\circ\text{C}</math>.</p>
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<p><b>3. Substrate Size:</b> The measurements should be possible on substrates/samples with sizes varying from 1x1 cm<sup>2</sup> to 100 mm in diameter. A provision of vacuum blocking pins could be provided to use different sample sizes on the same chuck by blocking vacuum line.</p>
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<p><b>4. Micropositioners:</b> Magnetic based micropositioners/micromanipulators four in number are required. The probe head X, Y, and Z movement should be at least 10 mm x 10 mm x 10 mm. The resolution/min. value of the movement should be <math>\leq 5</math> microns.</p>
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**5. Microscope:** Should include a optical microscope with 20X to 400X magnification, and connection with CCTV/Camera to see on computer screen. The microscope with X-Y movement of minimum 30 mm x 30 mm is required.

**6. Probe tips:** Provide options for all available probe tips with tip radius **up to 5 microns with materials like BeCu and W both.**

**7. Measurements:** The probe station and the micropositioners should be compatible for ultra-sensitive current-voltage (I-V) and capacitance-voltage (C-V) measurements on various devices. It should be possible to measure currents down to  $\leq 1$  pA and voltages of the order of mV. Capacitances of the order of pF should be measurable. In this connection, the vendor may be asked to provide the Supporting Brochure/Application Notes/ measurement data from a User preferably within India to validate their claim.

**8. Shielding/Dark box** with a provision of emergency light inside should also be provided.

**9. Optional:** Vibration isolation Table: A suitable vibration isolation table for the DC probe station may also be quoted for.

### **TERMS and CONDITIONS:**

1. The quotation, in sealed envelope marked as "Ref: **IITD/NRF/2012-13/DC-Probe-Station**" should reach the undersigned on or before **5 pm on 26-09-2012.**
2. The prices quoted should be **FOB** (Freight On Board) basis.
3. Technical and financial bids should be enclosed in separate sealed envelopes and clearly marked.
4. Institute reserves the right to accept/ reject all/ any quotation without assigning any reason thereof.
5. The delivery period should be clearly indicated in the quotation.
6. Submitted quotations should clearly mention the validity period, preferably for a minimum of **3 months.**
7. Incomplete and conditional submitted tenders would be summarily rejected.
8. The mode of payment should be clearly indicated. The preferred mode of payment is through irrevocable LC.

9. Necessary certificate should be enclosed by the vendor in case of proprietary nature of the quoted items.
10. In case the quotation is being submitted by authorized agent of the principal manufacturing company, the AUTHORISED SALES AGENCYSHIP certificate from the PRINCIPALS should be furnished along with the quotation. Quotations without this authorization certificate will be rejected.
11. The quotation should include comprehensive **warranty for at least 1 year**.
12. Special discount/rebate wherever admissible keeping in view that items are being procured for educational purpose in respect of Public Institution of national importance may please be indicated.

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