



# Indian Institute of Technology Kanpur

## Samtel Centre for Display Technologies

Enquiry number: SCDT/2013-14/10

Date: September 20, 2013

Sealed Quotations are invited for the supply of Stylus Surface Profiler as per the following specifications:-

Measurement Technique Stylus profilometry (contact measurement) with capability of 2D & 3D surface measurements and analysis;

Step Height Repeatability:  $<5 \text{ \AA}$ , 1sigma on nominal 1000A vertical step height standard

Scan speed 10-50  $\mu\text{m}/\text{sec}$

**Data points per scan : 1 million points or more**

Sensor Type: Thermally stable LVDT sensor (Linear Variable Differential Transformer) providing up to 1 Angstrom vertical resolution

Single Sensor Design: All-in-one sensor that enables scans at large vertical range (up to 1mm)

Stylus Exchange: Stylus held in sensor magnetically with kinematic mount (Quick-Change stylus replacement fixture included)

Scan Drive: Self-tensioning, belt driven scan stage, with the same portion of glass optical flat (polished to Lamda over ten) to provide a baseline stability of  $<1000 \text{ Angstroms}$  on 50mm scan

Video Microscope: High-definition 3.1 megapixel color video microscope for viewing sample surface at 45 degree angle and enabling stylus to stay in view during the scan (digital zoom from 1-4mm FOV or larger).

Stylus tip size:  $5\mu\text{m} - 1 \text{ No's}$

Scan Length: 50 mm or more

Vertical Range: Up to 1mm vertical measurement

Stylus force: 0.03-15 mg

Sample Stage: 6" X6" (150 X150mm) Positioning reliability better than  $5 \mu\text{m}$ , X-Y Sample Positioning: motorized with minimum 100mm x 100mm X-Y translation, Stage rotation should be 360 degree, Scan speed should be 0.1-5mm/sec, Should be able to accommodate sample sizes of upto 2 inch x 2 inch with up to 50 mm thickness

**Sample analysis: Software must have the following capability**

Stitching Capability: Stitching capability to allow system to stitch multiple scans together generating a seamless scab that covers a 6 inches of motorized travel.

Automated measurement: Automatic measurement collection facility must be provided

3D Mapping: Software should be provided to enable unlimited number of 3D map locations in a single recipe while displaying the map image progress in real-time along with the time remaining to completion.

Stress Analysis: Measures tensile and compressive thin film stress in MPa.

Step Detection: Automatically levels trace and finds and measures steps heights.

Database Software: Compares the results from multiple scans (provides mean and standard deviation with real-time plotting of results).

Analysis Parameters: Must include Step-Height, Surface-Area, Slope and Volume analysis.

Data Filters: Data Analyzer tree displays all applied filters including: Gaussian Regression, Fourier, Histogram, and statistical filters.

.Acoustic Enclosure: The Acoustic isolation enclosure must be provided.

**Optional:**

Stylus:  $0.7\mu\text{m} - 1 \text{ No's}$

Vibration Isolation: Vibration isolation system for whole system.

Terms and Conditions

1. Technical and financial details should be in separate envelopes.

2. Manufacturer shall be of internationally reputed brands.
3. Only authorized vendors may quote with authorization with principal.
4. System must be suitable for the soft films.
5. Vendor may be asked to show technical capabilities as our actual samples on the system.
6. Vendor must have good onsite technical & customer support in India.
7. Vendor must have experienced in dealing this kind of equipments from last 5-10 years.
8. Vendor may be asked for the details of customers to whom they had supplied a similar system for feedback.
9. Vendor should provide comprehensive warranty (additional warranty may be preferred.)
10. Maximum educational discounts should be applied.
11. Validity of quotation should be at least for 60 days.
12. The Rate offered should be free delivery of IIT Kanpur or ex-godown in case of firms situated outside Kanpur. If items are imported then the firms should quote the price on F.O.B / C.I.F. basis.
13. Institute is exempted for payment of Excise Duty under notification No. 10/97.
14. Institute is exempted for partial custom duty (CD applicable to IIT Kanpur is 5.15%).
15. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection).
16. Quotation should carry proper certifications like proprietary certificate, authorization certificate from manufacturer, etc.
17. The delivery period should be specifically stated. Earlier delivery may be preferred.
18. The indenter reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason is reserved.

Kindly send the quotation in sealed envelope latest by 3.00PM on 24.09.2013 to the following address;

Room No.305,  
Samtel Centre for Display Technologies,  
Indian Institute of Technology Kanpur-208016, UP, India.