Enquiry No: ChE/AS/Nov/01 Date: February 24, 2012
Last date: March 01, 2012

Dear Sir/Madam:

We are interested to purchase **LED based Maskless Lithography System for** our lab. You are requested to send us your best offer (separate technical and commercial offer) having following specifications.

LED based Maskless Lithography System specifications:

(a) Minimum feature size that can be patterned should be 1 micron on the photoresist surface.

(b) Additional optics for patterning of different larger size features.

(c) System should have both **Vector and Raster** processing modes for writing 3 D structures without edge roughness and discontinuities.

(d) The system should be capable of patterning the area up to 100mm x 100mm in a single exposure.

(e) Fully integrated high precision automated XYZ linear drive stage.

(f) Vacuum chuck to support desired substrate size.

(g) System should have LED source 390 **nm,** power should not be less then 10 watts. Lifetime of the laser source should not be less than 20000 hours.

(h) Ability to contour energy to specific levels through electric modulation of laser power.

(i) System should be compatible with commonly used photo resists such as **Shipley, SU8, AZ series.**

(j) System should be capable of grey scale imaging to fabricate 3-D structures in a single step.

(k) System should be capable fabrication of high **Aspect ratio structures in SU-8** photoresist up to ratio of **1:10** or Higher.

(l) Fully automatic operation including auto focusing feature, auto alignment with high resolution CCD camera imaging with video output.

(m) Single in line camera for both substrates viewing and focusing. Air-gauge auto-focus system with range of 80 micron.

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(n) System should be equipped with Windows based PC with control software for ease of use.

(o) System should be having integrated isolation table.

Spares and Consumables:

(a) A list of spares should be included with the equipment (such as laser sourse).
(b) Sufficient number of rapidly wearing and consumable parts should be included to cover the guarantee period.
(c) Vendor should guarantee the availability of spare/service support for a period of at least 6 years after installation.

Following details are also required with the offer.

1. Photography of the equipment (also mention system size).

2. Power consumption.

3. Warranty : 1 year

4. Annual Maintenance charges after warranty period-Comprehensive/Labor (Specify unlimited/fixed/breakdown visits) on per year basis.

5. List of Institutions/Laboratories (with name and contact details of the key person) where similar systems are installed in last five years. Kindly provide separate list for Indian and other country institutions.

6. Details of installation, training and after sales support arrangements (at least 3 days operational and maintenance training must be included in the quotation). It would be the responsibility of the supplier to install and demonstrate its quoted performance.

7. The supplier should also mention details of safety measures of the laser to avoid harm to the working personnel.

8. Up gradation of software for next 3 years with warranty of 3 years after

installation.

9. List of (a) consumables and (b) items required for periodic replacement and their availability in stock in India. If needed whether these spares/accessories are available in India with your agents. If not, what is the minimum lead time required to supply them?

10. Delivery period.

11. Quotation should be submitted with compliance table.

12. Prices should be FOB nearest airport.

Kindly send your offer in a sealed envelope marked **"LED based Maskless Lithography System -February2012"** so as to reach us on or before **March 01, 2012** to the following address:

Dr. Prabhat Dwivedi
DST Unit on Nanosciences
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Kanpur, INDIA-208016

For any technical query related to enquiry you may feel free to contact **Dr. Prabhat Dwivedi**, DST Unit on Nanosciences, Department of Chemical Engineering, Ph No. **(0512) 2596273 or 09450343059**; Email: **prabhatd@iitk.ac.in**