



# Indian Institute of Technology Kanpur

## Samtel Centre for Display Technologies

Enquiry number: SCDT/2013-14/21

Date: December 11, 2013

Sealed Quotations are invited for the supply and installation of “Vacuum Deposition System for Integrated Glove Box” with the following specifications:

1. The Vacuum deposition system size has to be around 60x55x50 cm<sup>3</sup> made of high grade Stainless steel and should be compatible with the Glovebox (GB) (Make: Jacomex) [Dimensions of the GB will be provided on demand].
2. The Vacuum deposition system should have two doors
  - a. One open Inside the GB – Sliding Door
    - i. The sliding support rail should be screw fitted.
    - ii. Locking of sliding door confirmation before start of pumping.
  - b. Another door open outside the GB – Hinged door
    - i. View port in the backdoor with magnet coupled shutter
3. VDS should be equipped with the Radiant heater, substrate holder with rotation, thermocouple, common thickness sensor, substrate shutter, needle valve, air admittance and one dummy port from the top of the chamber
4. VDS should be equipped with the following facilities from the bottom of the chamber
  - i. Effusion cells ports– 4nos. MBE Komponenten GmbH (NTEZ40-10-33-S-L283 )
  - ii. LT electrodes – 3nos (for three different boat(s)/filament(s).
  - iii. One HT electrode – 1nos
  - iv. Port for the Turbo pump compatible with Pfeiffer Vacuum (ACP 40, HiPace 700 Package, DN 160 CF-F,TC 400 cable, DCU 400 and Air cooling kit, PM 133 075 AT ). Turbo and Dry pump will be provided by customer
  - v. Thickness sensors – 4nos, Inficon and SL-A0G38, SQM-160. Both thickness sensor and monitor will be provided by customer.
  - vi. Boat/Filament source shutter (may be magnet coupled to avoid leak)
  - vii. Metal plate dividers in-between the boat/filaments to avoid cross deposition.
  - viii. One dummy port (DN40CF)
  - b. On the Side wall of the Evaporator
    - i. Vacuum gauge head
5. Thickness Sensors’ position(Inficon and SL-A0G38)
  - a. One common thickness sensor near substrate holder towards the effusion cells side.
  - b. One common thickness sensor for metal evaporation towards the glove box side of the evaporator.
  - c. Two near the effusion cells with cylinder attached
6. Position of Turbo
  - a. Turbo attached to the base of VDS
  - b. One removable cover plate for turbo
  - c. Evaporation flux shielding wall around the turbo
7. Substrate and Mask Holder
  - a. Substrate size ~ 15cm x 15cm
8. Two sets of chamber wall shielding sheets have to be provided (for easy cleaning of the chamber and replacement.)
9. The VDS should be on a supporting frame and legs satisfying the following conditions
  - a. Four supporting legs for VDS
  - b. Base height as per the glove box height (drawing shared by Jacomex)
  - c. The legs of the Vacuum deposition system should not obstruct or conflict with the legs of the GB.
  - d. There should not be any conflict with the legs of Vacuum deposition system while inserting the four effusion cells into their respective slots.
10. Rack has to be provided for the following items to be placed
  - a. Three effusion power supplies
  - b. Thickness monitor

- c. Turbo controller
- d. Vacuum gauge monitor
- e. PC Panel (CPU + Monitor)
- f. PLC
- g. On-off controllers and indicators
- h. Thyristor Controller
- i. Motor speed controller (substrate rotation)
- j. Radiant heater controller
- k. One HT transformer
- l. Three LT transformer

Parts supplied by the customer:

1. Effusion cells- 3nos
2. Three power supplies and temperature controller for effusion cells
3. One Inficon thickness monitor (six slots) and four sensors.
4. Pfeiffer turbo, dry pump and dual gauge.
5. Boat/filament electrodes.

Terms and Conditions:

1. Experience in fabrication and integration of vacuum deposition system with glovebox(particularly with Jacomex make glovebox) will be preferred.
2. Design to be submitted along with the technical bit
3. Indicate vacuum testing facilities at factory site.
4. Technical and financial details should be in separate envelope.
5. Maximum educational discounts should be applied.
6. Validity of quotation should be at least for 60 days
7. Prices should be FOR IIT Kanpur & should include the installation and training cost.
8. Institute is exempted from payment of Excise Duty under notification No. 10/97.
9. Warranty/Guarantee should be clearly mentioned.
10. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection)
11. Quotation should carry proper certifications like agency certificate, proprietary certificate, etc.
12. The delivery period should be specifically stated. Earlier delivery may be preferred.
13. 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 18.12.2013 to the following address;

Prof. S.S.K.Iyer

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