



TENDER ENQUIRY FORM
INDIAN INSTITUTE OF TECHNOLOGY
Kharagpur - 721302

Department: **ELECTRONICS AND ELECTRICAL COMMUNICATION**

ENQUIRY NO.: **IIT/ECE/ENQ/MEMS/3/2018 -19**

Date: **19/09/2018**

INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (*Technical and Commercial offers*) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment.

Name of the Equipment: **ELECTRON BEAM EVAPORATION SYSTEM**

Please send offers, **ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE**. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than 09.10.2018 at 17 00 Hrs at the following address:

To,
The Head,
Department of Electronics & Electrical Communication Engineering,
Indian Institute of Technology Kharagpur – 721 302, West Bengal, India

Earnest money of Rs. 5,00,000/- (Rupees five Lakh only) (Refundable) is to be deposited in the form of Account payee Demand Draft from any national/commercial bank in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

| | |
|---|---|
| Tender Reference | IIT/ECE/ENQ/MEMS/3/2018 -19, Dated 19/09/2018 |
| Tender Fee | Rs. 2,000.00 |
| EMD Amount | Rs. 5,00,000.00 |
| Last Date and Time for submitting the tender document | 09.10.2018 at 17 00Hrs(Indian time) |
| Time and Date of Opening of Technical Bids | 10.10.2018 at 11 30Hrs(Indian time) |
| Place of Opening Tender | Department of Electronics & Electrical Communication Engineering, Indian Institute of Technology Kharagpur–721302, West Bengal, India |
| Address of Communication | As stated above |
| Contact Telephone Numbers | +91-3222-283554 |
| E-mail | tkb@ece.iitkgp.ac.in |

“Any corrigendum/ addendum shall be published only in Institute Website and CPPP”

Tagorak Bhattacharyya
19/09/2018

Technical Specifications for Electron Beam Evaporation System

Approximate Budget 2.00 Crore INR

1. Purpose

- 1.1 One multi-pocket (6 x 7cc or 8 x 4cc) Electron beam and two water cooled thermal sources are required for deposition of high purity thin films & multilayer with controlled deposition rate on 100mm diameter wafer on Silicon, Alumina, Glass, and Quartz.
Uniformity of $\pm 3-5\%$ (deposition range 50-100nm) to be demonstrated on 100mm dia Substrate (silicon wafer) for dielectrics and metals, from single gun.
The system must include deposition chamber, vacuum pumps, valves and gauges, electron gun, Thermal Sources, power supplies, substrate fixture with heating mechanism, shutters, instrumentation and all necessary controls. The functional requirements, specifications and details of sub-systems are described in this document.
The system should be equipped with a load lock which will handle 100mm dia substrates. The transfer mechanism should be able to transfer 1 X 100mm dia or many smaller size substrates using a carrier. The load lock chamber should be equipped with RF/Ion beam Etch Facility so that the substrates can be cleaned before transferring to the process chamber for deposition.
- 1.2 System should be able to deposit thin films of high purity metals of thickness 10nm-3 μ m (depending on the material), as well as thin films of dielectric materials.
- 1.3 The system and subsystem should be compatible to Class 1000 clean room

2. Main System Frame

2.1 Vacuum Chamber

- 2.1.1 Water cooled stainless steel 304 non-magnetic chamber dimension, double hinged front opened door
- 2.1.2 Two view ports including shutters
- 2.1.3 At least 3Nos of spare ports should be provided for future expansion
- 2.1.4 Chamber shall have easily removable stainless steel liners for protection of the inner chamber wall against deposition
- 2.1.5 The chamber leak tested for $< 2 \times 10^{-9}$ Torr with std l/sec for Helium
- 2.1.6 Process chamber vacuum better than 6~8 x E-8 mbar & Load lock $< 2 \sim 3$ E-6mbar in 20 minutes
- 2.1.7 LN2 cold finger to be quoted. Preferably located on the top plate of the vacuum chamber with double-walled and insulated fill /vent and minimal intrusion into the chamber (< 100 mm intrusion). Construction to be SS and oxygen free copper, all UHV compatible."

2.2 Loadlock Chamber with Etch Facility -

Standard Loadlock chamber complete with TMP Based high vacuum pumping & vacuum gauges capable of base pressures of the order of 5×10^{-7} mbar should be offered.
The Standard Loadlock should be able to transfer ONE 100mm dia substrate or multiple smaller substrates using the transfer mechanism.
The gate valve between in the load lock & the process chamber should be interlocked for full proof operation.
Etch stage in load lock. Stage accepts 4" or smaller substrate platen. Isolated bias stage linear transfer mechanism.

2.3 Pumping System for Process Chamber

- 2.3.1 System should have roughing dry scroll pump, make of ANESTA-IAWATA / Leybold / Varian & Edwards

- 2.3.1.1 Minimum pumping speed: $10 \text{ m}^3/\text{h}$ ultimate pressure $7.5 \times 10^{-3} \text{ mbar}$
- 2.3.1.2 All the flanges, piping Connection cable, filter & any accessories require should be quoted
- 2.3.2 Turbo molecular pump 1000l/sec, or Cryo Pump, Make CTI / Austin /Leybold /Alcatel /Varian /Edwards / Pfeiffer
Ultimate vacuum in the Process Chamber should be of the order of $6 \times 10^{-8} \text{ mbar}$.
A LN2 Cold Finger should be incorporated in the Process Chamber in order to improve the base vacuum of the system
- 2.3.3 Pumping system should be fully automatic with interlock
Vendor should furnish the details of the vacuum pumps, their make, pump down time etc in the quotation. Pumping system should be fully automated and controller via a touch screen HMI module. Interlocks for water, vacuum, gate valve open / shut, linear probe in locked position, HT EB PSU covers, EB magnet should have status displayed
- 2.4 Gate Value** -System should have standard stainless steel bellow sealed pneumatically operated gate valve.6" I.D. Gate Valve pneumatically operated and fully integrated with the HMI. Gate valve of SS construction and HV or VAT Make. All the flanges, piping, Connection cable, filter & any accessories require should be quoted. Gatevalve should have indicator switches to feed status back to the HMI/PLC
- 2.5 Vacuum Gauges suitable for measuring low and High Vacuum**
Wide Range gauge of INFICON / AGILENT / Granville-Phillips/ Edwards
- 2.6 Evaporation Source**
- 2.6.1 Electron Beam Gun**
- 2.6.1.1 Electron Beam Gun (Make Telemark) 8 pockets x 4cc (option 6 pockets x 7cc) rotatable hearth with programmable XY sweep control to pin point E-Beam. Source beam point patterns are programmable from the software-control display.low arcing kit for dielectric material evaporation, 270° beam deflection.
Automated turret rotation to allow for automated multi-layer programming and integration to the thin film controller.
Mirror finished Stainless Steel Linear for inner chamber was against deposition & should be easily removable for cleaning
- 2.6.1.2 EB power supply (Make Temescal / Telemark / Ferrotec) 5 or 6 KW output power adjustable constant voltage stable beam position, better than $\pm 1\%$ voltage / current regulation. Safety interlocks for rear cover, water, vacuum and magnet.
Adjustable constant voltage stable beam position, better than $\pm 1\%$ voltage / current regulation.PSU should be operated via software control so that beam can be viewed at setup
- 2.6.2 Thermal Evaporation:**
TWO Thermal evaporation sources. Box type and water cooled. Rated at 400A max.
Digital programmable DCpower supply, 200A variable. Source is capable of accommodating spirals, baskets, filaments and boats of Tungsten of standards, lengths.
Supply of 20 W boats
- 2.7 Shutter (Source Shutters & Substrate Shutter)**
Separately pneumatically controlled Source Shutters Two for thermal and one for the E-Beam Gun.

Also a suitable pneumatically controlled substrate shutter will have to be offered.
All shutters should control & activate on manual mode over riding automatic control.

2.8 Deposition Rate Controller

Quartz Crystal Deposition Controller make INFICON SQC310 based on a multi-microprocessor design, which enables rapid measurement updates with superior resolution, as well as modular architecture.

Thickness Display: 0.000 to 999.9 KA

Rate Display: 0.0 to 999 A/sec

Controller to interface seamlessly with HMI/PLC control system for manual/automated hand over

2.9 Substrate Holder

Substrate Holder capable of holding various dimensions of substrate from 10 mm dia. to 100 mm dia. disc designed for long, trouble free operation

The system shall be delivered with 2 different substrate holders for different applications. Exact details to be agreed with client

Changing of substrate holders shall be performed by trained operator in less than 15 minutes

2.9.1 Planetary holder if necessary should be offered as an optional item.

2.9.2 Rotation gear driven, speed control DC motor and ferro-fluidics rotary feedthrough with speed 3-20 RPM. DC rotation stage to substrate platen, speed control and start/stop from HMI

2.9.3 Lift-off substrate holder for 100mm wafers

2.10 Substrate Heater

A suitable 1000W Quartz Lamp Heater for substrate front side heating should be provided for varying substrate temperature from RT to a maximum of 500°C with a thermocouple and proportional temperature control (PID). The required temperature accuracy is $\pm 1^\circ\text{C}$.

2.11 System control and software

2.11.1 PLC-PC interfaced for thin film deposition system (such as thickness controller, rotation controller, evaporation sources, pump down sequence, vent sequence, power control, shutter control, substrate heater and any required components) by HMI for complete automatic user friendly operation with Window based software with necessary data base management.

2.11.2 The software must be user-friendly for all types of processing.

2.11.3 The necessary software in the CD form should also be provided for future use

2.11.4 Software configured such that all automated processes can be manually controlled.

Deposition recipe control via SQC310 and set for automated multi-layers; system control via HMI (laptop option required)

2.12 Cabinet & Operational Power supply and Safety

2.12.1 The system should be fully mounted in an all metal cabinet / rack 19inch having removable side panels and rear panels for access and maintenance.

2.12.2 Power Input - Three Phase, 415 VAC $\pm 5\%$; 50 Hz; five wire

2.12.3 Earthing requirement if any should be mentioned.

2.12.4 All the electronic components should be commercially off-the-shelf type

2.12.5 Emergency Power Shutdown Switch on Front panel. Includes automated emergency shut of backing line valves and NC turbo vent valves for power out recovery situation.

2.13 Safety features

2.13.1 The equipment should be provided with the all safety devices and interlocks.

2.13.2 The System should be automated by means of the PLC/PC interlocked with all system sub-controller.

2.13 Consumable & Spare Parts

Necessary recommended consumables spare like O-rings, vacuum grease, fuses

Tungsten Evaporating Boats 20Nos

Tungsten Filament for E-Beam Gun 10Nos

Gold Coated Quartz Crystal 6 MHz 10Nos

Tool Kit

Spare Part for E-Beam Gun

Crucible liners 7cc (Boron Nitride, Alumina, Graphite and Vitreous Carbon over Graphite) 5 Nos each

2.15 Process Demonstration

The system should be tested at IIT Kharagpur as per the acceptance test procedure, the evacuation sequence, three deposition cycles should be demonstrated on customer's sample. Substrates and evaporation material for demonstration is to be provided by the customer.

2.16 Utilities / pre-installation requirement should be provided with the offer.

2.17 Installation and commissioning:

The supplier should do installation and commissioning of the equipment at IIT Kharagpur. The infrastructure/ utilities required from IIT Kharagpur during installation and commissioning should be mentioned with the offer.

2.18 Warranty

One-year comprehensive warranty has to be provided from the date of successful installation and commissioning at customer's site

Software up-gradation, if any, has to be incorporated free of cost during the warranty period.

2.18.1 Extended Warranty

Extended warranty for a period **two years** after the completion of standard warranty period (one year) should be quoted.

2.19 Documentation:

Vendor has to provide complete set of Operation, service & maintenance manual, Technical manuals with full diagrams and drawings in duplicate

2.20 OPTIONAL (The following items have to be quoted separately)

2.20.1 Additional gas lines with MFC and fittings

2.20.2 One set of gauges has to be quoted

2.20.3 Recirculating Chiller

2.20.4 Additional liner set

2.20.5 Crucible liners 7cc (Boron Nitride, Alumina, Graphite and Vitreous Carbon over Graphite) 10Nos each

2.20.6 AMC should be offered per year basis

2.21 Notes

The system must be complete in all respects and the manufacturer must ensure complete integration of all sub system with cables, connectors as required and take the responsibility for service.

List of at least 15 customer references of International Repute with their correspondence addresses (with email ID & phone and fax Nos.) has to be provided by the vendor, where similar systems have been installed.

Compliance statement of each and every point of technical Specifications & Commercial Terms & Conditions has to be provided.

Only reputed original equipment manufacturer (OEM) of international standard should submit the tender. The system being supplied should meet Semi Standards or European quality standard or certify by American Vacuum society or ISO Certified for design, fabrication, installation and testing.

The system fabrication assembly and testing at vendor site should be in Class 10000 or better

Vendor may be asked for technical presentation on their offered system

The vendor should undertake to service and supply the necessary spares for the electron beam evaporation system for a period of ten years.

Vendor will specify the time frame to attend the trouble shooting in case of any service issue

Vendor must have the local service support in India

Detailed operation and service manual (soft and hard copies) along-with software keys should be supplied.

Vendor has to supply and install the whole system by 18-20 weeks from the date of Purchase order.

GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDERS ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPES CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPES SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOPE.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL'S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.
3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.
4. **PRICE BIDS FOR FOREIGN FIRMS:** PRICES ARE TO BE QUOTED ON 'EX-WORKS' DULY PACKED ORON "FCA/FOB" INTERNATIONAL PORT" BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-
 - I) EX-WORKS PRICE
 - II) PACKING & FORWARDING
 - III) FREIGHT
 - IV) ANY OTHER RELEVANT EXPENSES.
 - V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ONDOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. **PERIOD OF VALIDITY:** BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.
6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN ~~FE~~), PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS

7. **MEASUREMENTS/WEIGHT:** NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).
8. **SCOPE OF SUPPLY:** SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING
9. **PAYMENT TERMS FOR FOREIGN FIRMS**

The offer will be made on a single currency and only one PO will be issued for the entire scope of the supply.

A) 90% PAYMENT THROUGH SIGHT DRAFT/FORIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION AND 10% AFTER SUCCESSFUL INSTALLATION & COMMISSIONING.

B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

PAYMENT TERMS FOR INDIAN FIRMS

A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER & CONDITION AND SUCCESSFUL INSTALLATION & COMMISSIONING.

B) ENSURE MENTIONING

i) BANK DETAILS OF THE BENEFICIARY, GST NO. AND PAN NUMBER

ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED **THEREAFTER CERTIFICATE FROM THE CONCERNED HEAD OF THE DEPARTMENT AND BALANCE 10% PAYMENT SHALL BE RELEASED AFTHTER SUBMISSION OF PERFORMANCE BANK GUARANTEE (PBG) AMOUNTING TO 10% OF THE PURCHASE ORDER VALUE. THE PBG WILL BE DRAWN FROM ANY NATIONAL/COMMERCIAL BANK**

ii) VALID FOR THE WARRANTY PERIOD PLUS SIXTY DAYS.

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.
11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.
12. THE INSTITUTE SHALL PROVIDE THE CONCESSIONAL CUSTOMS DUTY AND EXCISE DUTY EXEMPTION CERTIFICATE AS PER GOVT. NOTIFICATION NO. 51/96 CUSTOMS DATED: 23.07.1996 AND CENTRAL EXCISE DUTY EXCEMPTION IN TERMS OF GOVT. NOTOFICATION NO. 10/97 – CENTRAL EXCISE DATED: 01.03.1997 AS AMENDED FROM TIME TO TIME.
13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.
15. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.
16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.
17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.
18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.
19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-
- A) INCOME TAX RETURN (3 YRS) AND LATEST SALES TAX RETURN (GST No.), AND PAN NO.
- B) BANKER'S SOLVENCY CERTIFICATE
- C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY'S KEY PERFORMANCE

| DESCRIPTION | JAN. TO MARCH | APRIL TO JUNE | JULY TO SEPT. |
|--------------------|---------------|---------------|---------------|
| GROSS REVENUE | | | |
| PROFIT BEFORE TAX | | | |
| PROFIT AFTER TAX | | | |
| RETURN ON INVESTED | | | |
| CAPITAL (ROIC) | | | |

- D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.
- E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.
20. **WARRANTY / GUARANTEE:** THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR **36 MONTHS** AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.
21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. 22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO **Office of the Head, Dept of Electronics & Electrical Communication Engineering, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302** AND FOR ANY TECHNICAL/ SPECIFICATION RELATED QUERY PLEASE CONTACT:

Prof. T.K. Bhattacharya
Lab. In-Charge, MEMS Lab.,
Department of Electronics and Electrical Communication Engineering,
Indian Institute of Technology, Kharagpur-721302
[Ph.: 03222-283554]

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IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.
3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
4. For any query pertaining to this bid document correspondence may be addressed to **Prof. T.K.Bhattacharyya**, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 09.10.2018

- 1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
 - 2) Fax, e-mail Tender will not be accepted.
 - 3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.
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ANNEXURE - VI

FORMATFORPRICEBID

Format to be filled up by
the Agency

TenderNo.....

Dated.....

1. Name of Tender:

2. Name of Firm/Bidder:

3. Address:.....

4. Phone/ Fax/ Mobile/ Email:.....

| SL.NO. (a) | Description (b) | Unit Basic Price (inRs.) (c) | GST (in Rs.) (d) | Total(All Inclusive)(inRs.) (e=c+d) |
|------------|-------------------------------|------------------------------------|---------------------|---|
| 1. | Brand: _____ Model : _____ | | | |

**Signature of the bidder
with seal**