

## Tender Details

**Tender No:** SCL/PTDD/2017E0086801

**Tender Date:** 11/12/2017

**Purchase Entity:** Pur\_Entity2

## Tender Notice

E-Procurement Tender No. SCL/PTDD/2017E0086801 dated 11.12.2017. SEMI-CONDUCTOR LABORATORY [SCL] invites ONLINE offers in TWO part system through e-tender portal <https://eprocure.isro.gov.in> for Flat Wafers 8" Si Epitaxial wafer with 15 micron P-epi on P+ Substrate. Tender documents can be downloaded from 13.12.2017 - 1601 hrs. to 18.01.2018 upto 1500 hrs (IST). The vendors need to get registered in the e-tender portal to access tender and submit their offer online. Vendors need to have Digital Signature Certificate as detailed on our e-portal and corporate E-mail ID to register on the above portal. Only online tenders will be accepted. No Manual/Postal/courier/e-mail/fax tender will be entertained. Please note Tender Fee and Earnest Money Deposit (EMD) shall not be applicable for tenders submitted on-line through this portal.

Vendors interested to participate in this e-Tender are required to register themselves as vendors, if not already registered, in our e-procurement portal <https://eprocure.isro.gov.in> by downloading plugins and help demos listed on the home page of the e-procurement link mentioned above to complete the vendor registration process. They can seek help from help desk 020 25315555 / 9167969601 (Email: [support.isro@nextenders.com](mailto:support.isro@nextenders.com)) also the home page of e-procurement portal may be accessed for any technical help for registration and subsequent process. Vendors may please note that without registering in our E-procurement portal they will not be able to quote for this tender.

## **Tender Attachments**

### **Technical Write-up/Drawings**

#### **Attachment - I:**

IDT00151100000000000isro05401.pdf

#### **Attachment - II:**

#### **Attachment - III:**

#### **Attachment - IV:**

#### **Attachment - V:**

### **Instructions to Tenderers (PT)**

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1. Interested tenderers may, at their option, login to <http://eprocure.isro.gov.in> and submit offers as per details in the tender notification.
2. Request for the extension of the due date will not be considered.
3. SCL reserves the right to accept or reject any / or all the tenders in part or full without assigning any reasons thereof. The bidder is at liberty to seek information related to bidding conditions, bidding process and/or rejection of its bid.
4. In this tender either the Indian Agent on behalf of the Principal/OEM or the Principal/OEM itself can bid, but both cannot bid simultaneously for the same item. Indian agents while quoting on behalf of their principals shall provide necessary latest authorization letter obtained from their Principals/Manufacturers in their bid.

5. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the tender for the same item. If submitted, all offers submitted by the said agent shall be excluded from the procurement process.
6. The tenders of vendors who have not agreed to furnish Security Deposit and Performance Bank Guarantee as sought vide this tender shall be excluded from the procurement process.
7. The tenders of bidders where the validity of the tender is shorter than the period specified in the tender enquiry shall be excluded from the procurement process.
8. Late tenders, delayed tenders, fax quotations and e-mail quotations are not considered.
9. SCL reserves the right to verify all claims made by the bidder.
10. SCL reserves the right to change any milestone date of the tendering activity / tender schedule.
11. Tender which is not submitted in terms of instructions mentioned herein is liable to be rejected.
12. If tender opening date happens to be a public holiday, tender will be opened on the next working day and interested bidders may depute their representatives to attend the Tender Opening, with proper authorization.
13. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderer shall supply the same at the rates quoted.
14. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.
15. It is to be noted that the drawings, specifications, end-use, etc., given by the purchaser, are confidential and shall not be disclosed to any third party.
16. Prices are required to be quoted according to the units indicated in the tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
17. The Prices are to be mentioned both in figures as well as in words. The taxes, duties etc. are to be calculated and indicated in the column provided in online forms explicitly.
18. Bidders are expected to comply with commercial and other terms and conditions given in vendor specified terms of this tender. In case of any deviation, the reasons thereof should be clearly specified in the vendor specified terms column.
19. All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

20. Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.

21. Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

22. Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his bid. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

23. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

24. The Purchaser reserves the right to place order on the successful tenderer for additional quantities up to 25% of the quantity offered by them at the rates quoted.

25. The contractor shall also undertake the supply of additional number of items covered by the order as considered necessary by the purchaser at a later date, the actual price to be paid shall be mutually agreed to after negotiations.

26. Subletting and Assignment: The contractor/supplier cannot sublet, transfer or assign the order/Contract or any part thereof or interests therein or benefit or advantage thereof in any manner whatsoever, to any other party save with the previous written consent of the purchaser. Such consent by the purchaser, however, shall not relieve or discharge the contractor/supplier from any obligation, duty or responsibility under the Purchase Order/ Contract.

27. The authority of the person submitting the tender, if called for, should be produced.

28. The bids shall be opened as per schedule indicated in the Tender in the presence of the bidders/their authorized representatives who may like to attend the tender opening against presentation of Authorization letter.

29. Definitions:

a) The term Purchaser shall mean the Director, Semi-Conductor Laboratory or his successors or assignees.

b) The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractors Successors, representatives, heirs, executors and administrators unless excluded by the Contract.

c) The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores of plant, machinery, Software or equipment or part thereof.

d) The term Stores shall mean all that the Contractor agrees to supply under the Contract as specified in the Purchase Order including its installation, testing and commissioning as per the specifications.

### 30. PROCEDURE FOR EVALUATION OF TENDERS:

#### Technical Evaluation Criteria:

Vendor meeting the basic technical specifications mentioned in SCL Tender shall be considered to be technically qualified.

#### Evaluation of Price Bids

The following elements shall be considered for evaluation of Price Bids:

- a. Price quoted by the bidder in the price bid template for meeting the functionalities given in the Tender and Technical Specifications sheet.
- b. Compliance with the Payment Terms prescribed in this tender document. In the event, the bidder offers Payment Terms stringent than SCL prescribed Payment Terms, the bid of the bidder shall be loaded based on MCLR of SBI prevailing on the date of opening of price bids.

### **Terms and Conditions - Imported Items**

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1. The Tenderers should submit the bids through e-procurement portal <http://eprocure.isro.gov.in> and complete in all respects with technical specifications, including pamphlets and catalogues.

2. The bid should contain the following information:-

a. The FCA value for import by Air Freight upto IGI Airport, New Delhi.

b. Agency Commission: Bidders are required to provide the following information in respect of their authorised Indian Agent, if any, along with technical bid as the same is mandatory as is required for consideration of the bid. Name, Address, Telephone no. , fax no., email of the Indian Agent including the contact person. A letter from the Manufacturer/supplier in the current date certifying that the said

Indian Agent is their authorised Indian Agent and also indicating the responsibilities/role of the Indian Agent under the proposed purchase. Renumeration/service charges payable to the Indian Agent under the proposed purchase. The amount of agency commission included in the price and payable to Indian Agent of the contractor shall be paid directly to the Indian Agents by the Purchasers in equivalent in Indian rupees on the basis of an invoice from him applying TT buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. The payment will be released to the Indian Agents within 30 days from the date of acceptance of the goods.

- c. The earliest delivery period and country of origin of the Stores.
  - d. Bankers name and address of the contractor.
  - e. The approximate net and gross weight and dimensions of packages/cases.
  - f. Details of any technical service, if required for erection, assembly, commissioning and demonstration as applicable.
3. The FCA prices quoted should be inclusive of all taxes, levies, duties arising in the tenderers country.
  4. The offer should be valid for a minimum period of 120 days from the due date of opening of the tender.
  5. Samples, if called for should be sent free of all charges.
  6. Bids will not be entertained after the due date and time.
  7. Offers made by Indian Agents on behalf of their Principals, should be supported by the necessary authorization letter from their Principals.
  8. The details of Import License will be furnished in the Purchase Order.
  9. The Authority of person submitting the tender, if called for, shall be produced.
  10. Instruction/operation manual containing all assembly details including wiring diagrams should be sent wherever necessary in duplicate. All documents/correspondence should be in English Language only.
  11. The Purchaser reserves the right to accept or reject the lowest or any other offer in whole or in part without assigning any reason.
  - 12 It is expressly agreed that the acceptance of the stores contracted for is subject to final approval in writing by the Purchaser.
  - 13 a. Part shipment is not allowed unless specifically agreed to by us.

b. As far as possible, stores should be dispatched by Indian Flagged Vessels/ Air India or through any Agency nominated by us.

14. Inspection/Test Certificates should be provided for the goods after testing it thoroughly at the Contractors works. If any inspection by Lloyds or any other testing agency is considered necessary, it shall be arranged by Contractors.

15. Where erection or assembly or commissioning is a part of the contract, it should be done immediately on notification. The Contractor shall be responsible for any loss / damages sustained due to delay in fulfilling this responsibility.

16. For items having shelf life / those with maximum shelf should be supplied, if order is placed.

## Bid Templates

### Material Specifications

#### Item Specifications

Sl. No	Specifications	Compliance (Yes/No)	Offered Specifications	Remarks
1	General: Process: Cz or MCz			
2	Wafer Type: p-type silicon			
3	Dopant: Boron			
4	Laser Mark: None			
5	Geometry:Diameter (mm): 199.80min; 200target; 200.20max			
6	Thickness (micron): 705min; 725target; 745max			
7	Orientation-1 Notch: Figure 1			

8	Bevel Configuration: Refer Fig.2 and Table 1			
9	TTV : 5.0 micron max			
10	Bow : 50.0 micron max			
11	Warp : 50.0 micron max			
12	SFQR (TIR-site) site size 22mm X 22 mm 0 - 0.4 micron (100% PUA, include partial sites, no offsets)			
13	Electrical: Resistivity of substrate: 5mohm - 20mohm			
14	Radial resistivity gradient in substrate: <= 10%			
15	Crystallographic: Polished surface orientation: <100> +/- 1 degree			
16	Appearance: Front surface finishing: Mirror surface			
17	Back surface finishing: Lapped/Etched/Polished Si surface OR If back side			

	<p>surface has sealing or over layer such as poly-silicon, LTO or both, the total thickness of these layer stack should not be greater than 1200nm. Vendor to specify the stack layer configuration, thickness in technical bids and CoC/CoA.</p>			
18	<p>Impurities: Oxygen (Oi) concentration: 10 - 16 ppma</p>			
19	<p>Carbon Concentration: 2.5E1016 atoms/cm3 max.</p>			
20	<p>Surface impurities: Na, Al, K, Cr, Fe, Ni, Cu, Zn and Ca : 3.0E1010 atoms/cm2 for individual species.</p>			
21	<p>Epi layer characteristics (15micron P- epi on P+ substrate): Epi type: P-</p>			
22	<p>Dopant: Boron</p>			
23	<p>Front surface finishing: No haze, stains, scratches visible under bright</p>			

	collimated light			
24	Epi layer characteristics: Epi thickness (micron) type-III: 14.5min; 15.5target; 16.5max			
25	Epi resistivity (P-): 10-20 ohm-cm			
26	Epi resistivity gradient: 8% max			
27	Particle count of >=0.2micron: <= 18 particles/wafer			
28	Particle count of >=0.16micron:<= 35 particles/wafer			
29	Stacking faults (>= 1micron): <= 10 Counts			
30	Organize 25 wafers per box and use SEP A2 or SEP A5 or Entegris boxes for shipping.			

### Material Specifications

**Item Specifications -I**

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
31	<p>Package requirement: SEP A2 or SEP A5 or Entegris (Empak or Ultrapak) boxes. Each cassette should have label with Customer's part number ID and brief description, Vendor and Customer name, PO number, wafer quantity, date of manufacturing and manufacturing location.</p>			
32	<p>Test specifications: Vendor to provide complete analytical data in Certificate of Analysis (CoA) vis-a-vis SCL's specifications. Vendor shall provide information about initial wafers based on Certificate of Compliance (CoC) from substrate manufacturer. Vendor to specify the</p>			

	number of wafers tested from Sample Lot and actual Delivery Lot against each specification in CoA/CoC.			
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**Vendor Specified Terms**

Description	Vendor Terms
<p>1.1 For imported stores, prices shall be quoted on FCA nearest International airport basis.</p> <p>1.2 For indigenous stores, prices shall be quoted on F.O.R destination basis i.e. SCL, S.A.S. Nagar, Mohali, Punjab exclusive of taxes as may be applicable.</p> <p>1.3 For indigenous stores, please indicate the rate of GST /any other Govt levy as applicable.</p> <p>1.4 Purchaser is entitled to concessional CGST of 2.5 % and IGST of 5 % as per Ministry of Finance, Department of Revenue, Notification Nos. 45/ 2017 Central Tax (Rate) and 47/2017 Integrated Tax (Rate) both dated 14th November, 2017 respectively and would accordingly issue Exemption Certificate in favour of the contractor quoting in Indian Rupees. The bidder should take note of the same while quoting the prices in Indian Rupees.</p> <p>1.5 The prices of the indigenous items shall also be exclusive of transit insurance which shall be arranged by the Purchaser and shall be to</p>	

<p>Purchaser account.</p> <p>1.6 For imported materials, the Purchaser is entitled to issue Customs duty exemption certificate (CDEC) to the contractor under customs notification no.51/96 dated 23.07.1996 and subsequent amendments to enable the contractor to avail off the benefit of concessional rate of customs duty under this notification. CVD under this notification is nil. In addition to the above CDEC, any documentary support requested by the contractor from the purchaser for customs clearance of goods against the above CDEC shall be provided by the purchaser.</p>	
<p>2. SECURITY DEPOSIT:</p> <p>2.1 On acceptance of the tender, the Contractor shall submit security deposit for ten percent (10 percent) of the value of the Contract within 15 days from the date of purchase order. If the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores contracted at the cost and risk of the Contractor.</p> <p>2.2 Security Deposit shall be submitted through Demand Draft / Bankers Cheque/ fixed deposit receipt or Bank Guarantee from any of the Scheduled Banks executed on non-judicial stamp paper of appropriate value, and shall be valid for a period of sixty (60) days beyond the date for completion of the Purchase Order/Contract.</p> <p>2.3 In case the contractor fails to furnish the security deposit within the specified date or extended due date, the Purchase Order/Contract shall be cancelled, and the EMD, if any, made earlier shall be forfeited,</p>	

<p>and, in addition, appropriate penal action may also be considered.</p> <p>2.4 After the Purchase Order/Contract is successfully executed in all respects, the Bank Guarantee towards Security Deposit may be discharged and retained amount and / or EMD refunded to vendors.</p> <p>2.5 In the event of non-execution of the Purchase order/Contract or breach of any terms and conditions of the Purchase Order, the Security Deposit shall be forfeited.</p>	
<p>3. DELIVERY PERIOD:</p> <p>The bidder shall specify their best delivery period inclusive of all Govt. formalities of the exporting country.</p>	
<p>4. Acceptance Criteria: Stores should be from the latest manufacturing lots only. Certificate of Analysis (CoA) or Certificate of Conformance (CoC) of the stores shall be supplied by the Vendor to the Purchaser for approval prior to delivery of the consignment to the Purchaser designated Freight Forwarder. The said CoA or CoC should clearly indicate the Lot Number, date of manufacture etc.</p>	
<p>5. GUARANTEE &amp; REPLACEMENT:</p> <p>(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.</p> <p>(b) If, in the opinion of the purchaser, it becomes necessary to replace</p>	

<p>any defective stores such replacement shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser within one month from the date of receipt at SCL.</p>	
<p>6. TERMS OF PAYMENT IN CASE OF OVERSEAS SUPPLIER[S]:</p> <p>6.1 Being a Department of the Government of India, the normal terms of payment are by Sight Draft.</p> <p>6.2 While the purchasers bank charges shall be borne by the purchaser, the contractor shall bear the bank charges payable to his banker.</p>	
<p>7. TERMS OF PAYMENT IN CASE OF INDIGENOUS SUPPLIER[S]:</p> <p>7.1 Payment will be made for the accepted stores within 30 days from the date of receipt of the materials at purchaser site.</p> <p>7.2 While the purchasers bank charges shall be borne by the purchaser, the contractor shall bear the bank charges payable to his banker.</p>	
<p>8. ADDRESS OF INDIAN AGENT:, if any</p>	

<p>9. VALIDITY:</p> <p>The tender must be valid for a minimum period of 120 days from the date of opening of bids.</p>	
<p>10. MODE OF DESPATCH:</p> <p>In case of foreign supply, generally stores should be despatched through Indian Flagged Vessel / Air India or through any other Agency nominated by the purchaser whose contact details shall be indicated in the purchase order.</p> <p>A copy of the invoice and packing list should invariably be kept inside each of the packages.</p>	
<p>11. INSURANCE OF THE STORES:</p> <p>Insurance wherever necessary, will be arranged by the Purchaser. The necessity or otherwise of insurance will be as indicated in the Purchase Order/Contract.</p>	
<p>12. CONTRACTORS DEFAULT LIABILITY:</p> <p>The purchaser may upon written notice of default to the Contractor</p>	

<p>terminate the Contract in whole or in part in circumstances detailed hereunder:</p> <p>a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/ agreement or within the period for which extension has been granted by the Purchaser to the Contractor.</p> <p>b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.</p>	
<p>13. REPLACEMENT:</p> <p>If the stores or any portion thereof is damaged or lost during transit, the Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.</p>	
<p>14. DELAY IN COMPLETION/LIQUIDATED DAMAGES:</p> <p>If the Contractor fails to deliver the stores within the time specified in the Contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one</p>	

<p>percent (0.5 percent) of the Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.</p> <p>Delivery of stores shall be complete on Installation, commissioning, Testing and Acceptance as applicable.</p>	
<p>15.PACKING:</p> <p>a) The Contractor wherever applicable shall pack and crate all stores for sea /air/road shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail, air or sea. The Contractor shall be held responsible for all damages due to improper packing.</p> <p>b) The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.</p> <p>c) The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.</p>	

<p>d) The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.</p> <p>e) Trans-shipment of equipment shall not be permitted except with the written permission of the purchaser.</p> <p>f) Apart from the despatch documents negotiated through Bank, the following documents shall also be airmailed to the purchaser within 7 days from the date of shipment by sea and within 3 days in case of air-consignments:</p> <p>a) Commercial Bill of Lading / Air Way Bill / Post parcel Receipt. (Two non-negotiable copies)</p> <p>b) Invoice (3 copies)</p> <p>c) Packing List (3 copies)</p> <p>d) Test Certificate (3 copies)</p> <p>e) Certificate of Origin, as applicable.</p> <p>The Contractor shall also ensure that one copy of the packing list is enclosed in each case.</p>	
<p>16. ARBITRATION:</p> <p>If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one</p>	

<p>to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India.</p> <p>In case of dispute arises with domestic/Indian suppliers, the applicable Arbitration procedure shall be as per Indian Arbitration &amp; Conciliation Act, 1996.</p>	
<p><b>17. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:</b></p> <p>Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the purchaser unless specific written acceptance thereof is obtained.</p>	
<p><b>18. APPLICABLE LAW:</b></p> <p>The Contract shall be interpreted, construed and governed by the laws of India.</p>	
<p><b>19. Any Other Term:</b></p>	

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**Supporting Documents from Vendor**

**Attachment - I:**

**Attachment - II:**

**Price Bid Form**

Item Description	Slab Range	Qty	UOM	Currency	Unit Price	Total Price
Flat-Wafers 8"Si epitaxial wafer with 15micron P-epi on P+ substrate	-	600	No.	-	-	-

Break-up of other taxes and other costs should be specified in respective narration columns.

Sum of these Break-up values should be specified in respective value columns.

