



**SEMI-CONDUCTOR LABORATORY**  
Ministry of Electronics and Information Technology  
Government of India  
Sector 72, S.A.S. Nagar – 160 071, Punjab, India  
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**INVITATION TO TENDER NO.: SCL/PS/45093/VAHD/05**

E-tender /Online bid is invited for **Supply of Ceramic IC Package-PGA 124 for Imager-1 (Development, fabrication & supply)** in accordance with the purchaser's tender specifications. The invitation to tender, tendering conditions, general conditions of contract, special conditions of contract and additional conditions of contract, if any, which will govern the contract pursuant to tender are attached.

Bidders interested to submit bid are requested to go through the contents of this document and ensure that the bid is submitted online on or before the due date and time indicated in NIT and as per technical specifications and terms and condition indicated herein.

Please note all bid related documents scanned copy is to be submitted on the online portal, only EMD Demand draft has to reach physical on mentioned address. (If applicable)

**PSO**



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## **Tender Document**

**For**

**Supply of Ceramic IC Package-PGA 124 for  
Imager-1(Development, fabrication & supply)**

**TENDER NO.: SCL/PS/45093/VAHD/05**

### **TENDER INVITING AUTHORITY**

**SEMI-CONDUCTOR LABORATORY**

**MINISRTY OF  
ELECTRONICS AND  
INFORMATION  
TECHNOLOGY**

**GOVERNMENT OF INDIA**

**SECTOR 72, SAS NAGAR MOHALI**

**PUNJAB – 160 071**

**Mr. Naresh Singh**

**PSO**

**Direct - 0172-2296169**

**Email: [naresh@scl.gov.in](mailto:naresh@scl.gov.in)**



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### **Tender Document**

TENDER NO.: SCL/PS/45093/VAHD/05

March 19, 2025

Subject: Quotation for **Ceramic IC Package-PGA 124 for Imager-1**  
**(Development, fabrication & supply)-reg.**

We intend to procure as per details given below:

<b>Sr. no</b>	<b>SCL Material Code</b>	<b>Item Description and Specification</b>	<b>Qty. (Nos.)</b>
1	230216266	Supply of Ceramic IC Package-PGA 124 for Imager-1 (Development, fabrication & supply) as per Specifications attached as Annexure-I & II	120
2		One Time NRE charges	01

Kindly submit your quotation online as per tender schedule.

### **Note:**

- Tender details may be viewed and downloaded from the website.  
<https://eprocure.gov.in/eprocure/app>
- The bids have to be submitted online in electronic form on [www.eprocure.gov.in](http://www.eprocure.gov.in) only. No physical bids will be accepted.
- For any queries please mail us at [naresh@scl.gov.in](mailto:naresh@scl.gov.in) , [vmehta@scl.gov.in](mailto:vmehta@scl.gov.in) Contact No. 0172-296169/2296175

Tender: SCL/PS/45093/VAHD/05

<https://www.scl.gov.in>

**Filled up response fully stamped and signed by authorized bidder to be scanned and uploaded**

**TENDER ACCEPTANCE LETTER**

**(To be given on Company Letter Head)**

Date: \_\_\_\_\_

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sub: Acceptance of Terms Conditions of Tender.

Tender Reference No: \_\_\_\_\_

Name of Tender / Work:- \_\_\_\_\_

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: \_\_\_\_\_ as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public Sector Undertaking.

6. I / We certify that all information furnished by our Firm is true correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

**Yours Faithfully,**

**(Signature of the Bidder, with  
Official Seal)**

Tender: SCL/PS/45093/VAHD/05

<https://www.scl.gov.in>

**Commercial Terms Conditions to Tender Ref. No. SCL/PS/45081/VAHD/05**

**Filled up response fully stamped and signed by authorized bidder to be scanned and uploaded in Technical part Cover-1 only**

Sr.no	Description	Vendor's Compliance
1.	Being a <b>Two Part</b> Tender Technical and Commercial part are separate. <b>The Technical part (Cover-1) should not contain any Pricing information.</b>  <b>The tenders containing Price details in Technical part (Cover-1) will be summarily rejected.</b>  <b>The prices should be quoted in Price-Bid Form BOQ and to be uploaded in BOQ-Commercial (Cover-2) only.</b>	
2.	The Vendor / Contractor shall confirm that they have submitted the offer for NEW Items only.	
3.	OEM or authorised distributor/representatives of OEM can participate in the tender and an authorisation certificate/letter from OEM to be submitted alongwith the Cover-I of the bid.	
4.	<b>Compliance/acceptance to :</b>  I. Specifications attached as Annexure-I (Scope of work) & Annexure-II (Material Specifications) II. Tender Acceptance Letter. III. BOQ in xls. and as well as signed, stamped and scanned copy. IV. The bids have to be submitted online in electronic form on <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a> only. V. No physical bids will be accepted.	
5.	<b>Validity of Bid:</b>  The offer should be valid for a minimum period of 120 from the date of opening of Tehno-Commercial bid and 90 days after opening of Price Bid.	
6.	<b>Delivery Terms (For imported stores):</b>  Prices shall be quoted on FOB/FCA nearest International/Gateway airport basis inclusive of all taxes, levies, duties arising in the tenderer country.	
7.	<b>Export Formalities, Taxes &amp; Duties:</b>  Any export approvals/Govt. clearances required, Taxes and duties as per laws of the exporting country shall be the responsibility of Vendor. Any Govt. formalities/ Clearances required, Taxes and duties etc. payable as per Indian Laws shall be PURCHASERS responsibility.	
8.	<b>Delivery Terms (For Indigenous stores):</b>  Prices shall be quoted on F.O.R. destination basis i.e. SCL, S.A.S. Nagar, Mohali, Punjab exclusive of GST as may be applicable.	
9.	<b>For imported materials:</b>  Vendors, who are offering the delivery term as High Sea Sales/DDP/FOR basis, please note that Purchaser is entitled to issue Customs duty	

	<p>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, basic Customs Duty shall be applicable at the rate 5.5 percent plus GST as applicable. 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>(Purchaser will provide Customs Duty Exemption Certificate in case of Import Orders/ imported supplies/ High Sea Sales).</p>	
10.	<p><b>Goods and Service Tax (GST (for Indigenous Stores):</b></p> <p>GST shall be payable extra as applicable. Please mention percentage of applicable GST along with HSN Code in your response.</p>	
11.	<p><b>Security Deposit (SD):</b></p> <p>On acceptance of the tender, the Vendor shall submit security deposit for three percent (3% percent) value of the Purchase Order (PO) within 15 days from the date of PO towards successful execution of the PO. 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 till execution of PO and should remain valid for a period of sixty (60) days beyond the date for completion of the Purchase Order. This will be returned by SCL immediately on execution of the PO satisfactorily as per order terms. If not, the amount will be forfeited.</p> <p><b>Note:</b> In case, Security Deposit is submitted in the form of Bank Guarantee (BG) and Issuing Bank utilizes SFMS (Structured Financial Messaging Solution) Gateway for issuing the BG in favour of SCL and mention IFSC code of SCL banker i.e. State Bank of India, SBIN00061229, genuineness of the BG will be verified by SCL's banker by checking into SFMS gateway.</p> <p>In case, Security Deposit is submitted in the form of Bank Guarantee (BG) and Issuing Bank not utilizes SFMS (Structured Financial Messaging Solution) Gateway for issuing the BG, Vendor to ensure that Banker gives Bank Guarantee (BG) confirmation over email from their Domain immediately after issuance of the same at the following email Ids followed by hard copy:</p> <p><a href="mailto:sunitagaur@scl.gov.in">sunitagaur@scl.gov.in</a>  CC: <a href="mailto:naresh@scl.gov.in">naresh@scl.gov.in</a> and <a href="mailto:vmehra@scl.gov.in">vmehra@scl.gov.in</a>  In addition, the banker may send a scanned copy of the BG as an attachment.</p>	
12.	<p><b>Terms of Payment in case of overseas supplier(s):</b></p> <p>100% payment shall be made through SIGHT DRAFT after shipment. Vendor is requested to send the original documents (i.e Invoice, Packing List, AWB or BL etc.) to PURCHASER BANKER routed through VENDOR BANK for payment at the following address:</p> <p>State Bank of India(61229)  Semi-Conductor Laboratory  Sector 72, Mohali, Punjab - 160071, INDIA.</p>	

13.	<b>Bank Charges:</b> All bank charges outside India related to the payment shall be borne by the Contractor and all bank charges in India shall be borne by the purchaser.	
14.	<b>Terms of payment in case of Indigenous supplier(S):</b>  100% payment shall be made for the accepted stores with 30 days from the date of receipt and acceptance of the materials at SCL.	
15.	<b>Tax Deducted At Source (TDS) for overseas supplier (s):</b>  Tooling cost / NRE Charges shall be payable after deduction of TDS as per Indian Income Tax Act 1961 with latest amendments thereof, if the vendor has permanent establishment in India. Vendor shall also certify whether they have valid PAN issued by Income Tax Department of India. If the vendor has not permanent establishment in India, TDS shall be deducted as per Double Taxation Avoidance Agreement.	
16.	<b>Delivery Period:</b>  The vendor shall specify their best minimum delivery period inclusive of all Govt. formalities of the exporting country.	
17.	<b>Delay in Completion/Liquidated Damages(LD):</b> 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 percent (0.5 percent) 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.	
18.	<b>Extension of Time:</b>  If the completion of supply of stores is delayed due to reason of force majeure such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.	
19.	<b>Despatch of stores after expiry of delivery period:</b> i. After expiry of the delivery period, the vendor should not despatch the stores till such time an extension in delivery period is granted by the Purchaser, and Purchaser reserves the right to cancel the Purchase Order/Contract when the ordered stores items are not received before expiry of the original delivery period or the extended delivery period. ii. In case the stores are dispatched by the vendor before obtaining an extension of the delivery period from the Purchaser, he would be doing so at his risk and no claim for payment shall lie against the Purchaser either in respect of the cost of the stores despatched or any other related expenses which the vendor may have incurred. iii. In case the stores are required by the Purchaser even though they are delivered after the delivery period, the delivery date may be extended and the stores taken delivery off, subject to the right to claim damages for delay in supply. iv. The payment shall be made to the vendor after getting necessary amendment as per clause (iii) above.	

20.	<p><b>Mode of Despatch:</b></p> <p>(i) <b>Overseas Supplier</b>, stores should be despatched by Indian Flag Vessels/Air India or through any Agency nominated by SCL whose contact details shall be indicated in the purchase order.</p> <p>(ii) <b>Indigenous orders:</b> Vendor responsibility.</p>	
21.	<p><b>Packing and Forwarding:</b></p> <p>The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.</p>	
22.	<p><b>Fall Clause:</b></p> <p>The prices charged for the stores supplied under the Contract by the vendor should in no event exceed the lowest price at which the vendor sells the stores of identical description to any other person during the period of the Contract. If at any time, the prices are reduced, the same shall be notified to the Purchaser and shall stand correspondingly reduced.</p>	
23.	<p><b>Rejection:</b></p> <p>In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser.</p>	
24.	<p><b>Replacement:</b></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>	
25.	<p><b>Arbitration:</b></p> <p>In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 as amended from time to time. The arbitration shall be conducted in New Delhi in the Arbitration and Conciliation Centre, New Delhi (Domestic and International) as per its rules and regulations. The expenses for the</p>	

	<p>Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only.</p> <p>Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.</p>	
26.	<p><b>Applicable Law:</b> The Contract shall be interpreted, construed and governed by the laws of India.</p>	
27.	<p>Whether the Vendor / Supplier is from any country sharing land boundary with India or whether the vendor / supplier is representing any principal vendor /principal supplier sharing land boundary with India. If the vendor / supplier is from any country which shares land border with India or if the vendor /supplier is and Indian Agent representing principal vendor/principal supplier of a country which shares land border with India they need to submit a photo copy documentary proof of Registration with Registration Committee constituted by Department of promotion of Internal Industry and Trade DPIIT Offers received from vendors who fall in this category but does not submit copy of documentary proof of registration shall be rejected.</p>	
28.	<p>The participating Indian Vendors/Suppliers/Service Providers shall indicate specifically whether they fall in the category of Class I local supplier or Class II local supplier or Nonlocal supplier for evaluation as per Ministry of Commerce Industry office order no. P45021/2/2017PP(BEII)-Part(4)Vol.II dt. 19th July, 2024.</p> <p>The vendor/supplier/Service Provider shall submit declaration as documentary proof in this regard.</p> <p>The provision of above referred OM shall apply for this procurement. Purchase preference shall be Governed by the above mentioned orders and subsequent orders issued from time to time.</p>	
29.	<p>Indian agent remuneration/service charge (If applicable) shall be payable by the Purchaser directly to the Indian agent in Indian Rupees based on T.T buying rate of exchange prevailing on the date of placement of purchase order within 30 days of acceptance of material at purchaser site.</p>	
30.	<p>Indicate the Name and address of the vendor for placing purchase order along with their e-mail ID, contact person name and designation, Telephone no. and fax no.</p>	
31.	<p>Any Other Term:</p>	

**Yours Faithfully,**  
**(Signature of the Bidder, with Official Seal)**

**Scope of Work for Fabrication of Ceramic PGA Package 04P**

This document contains package specification along with SCL and vendor responsibilities in development and fabrication of ceramic package.

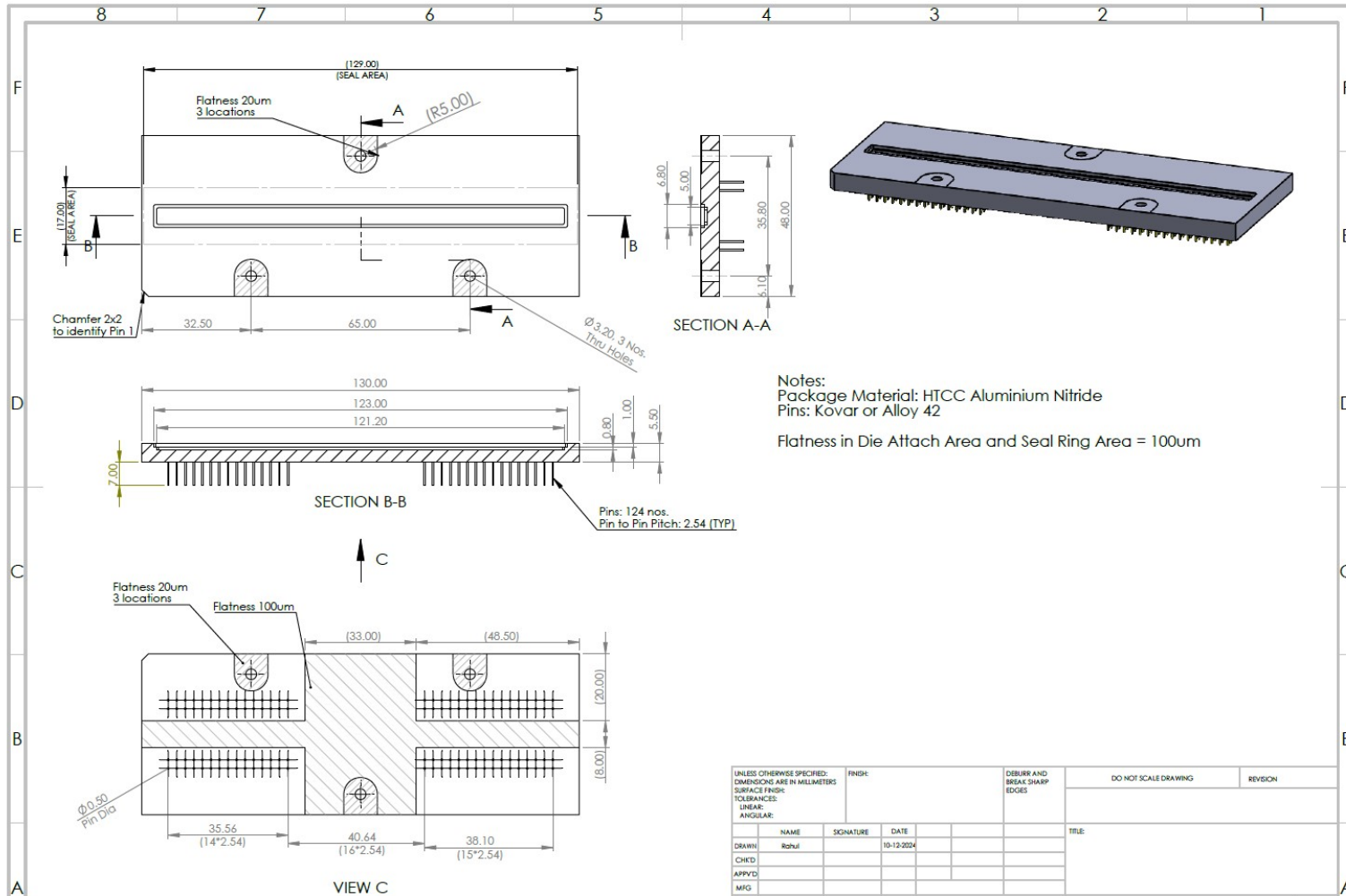
**Package Specification:**

- Substrate Material: Aluminum Nitride (AlN)
- Tentative No. of Ceramic layers: 21 nos.
- Tentative no. of pins: 124
- Tentative No. of signal layers + other metal layers: 10 nos.
- Tentative No. of metal plane layers: 07 nos.
- Tentative Package Drawing: Attached Annexure I-A (Layout will be provided after PO placement in .sip or .mcm format)
- Tentative Stack-up: Attached Annexure I-B
- Tentative Bond Pad Configuration: Annexure I-C
- Physical Design constraints used: attached Annexure I-D
- Flatness near mounting holes area: 20um in  $\phi$  10 mm region
- Flatness of die attach area: 100um
- Flatness of seal ring area: 100um

**Vendor Responsibilities:**

- SCL shall provide package layout to vendor. Any further required modification shall also be done at SCL.
- Vendor shall carry out Design Rule Check (DRC) for manufacture and convey to SCL for further action.
- Once the layout is finalized SCL shall issue an official letter (sign-off letter) for initiation of fabrication process.
- The vendor shall deliver the manufactured package within 24 weeks from the date of issue of sign-off letter.

## Annexure I-A:

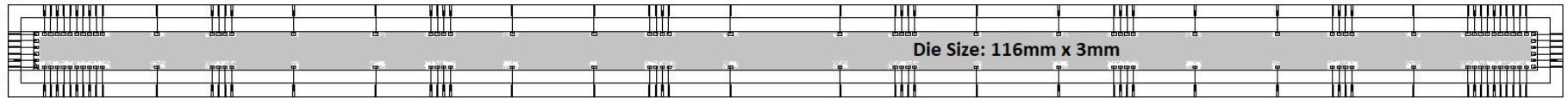


**Tentative Package Drawing**

## Annexure I-B:

Subclass Name	Type	Material	Thickness (UM)	Conductivity (mho/cm)	Dielectric Constant
TOP	CONDUCTOR	TUNGSTEN	5	58800	8.70
VP1	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
VP2	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
VP3	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
VP4	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
VP5	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
VP6	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
MP7	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP7	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
MP8	PLANE	TUNGSTEN	5	58800	8.70
VP8	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
MP9	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP9	DIELECTRIC	ALUMINUM_NITRIDE	203	0	8.70
MP10	PLANE	TUNGSTEN	5	58800	8.70
VP10	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP11	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP11	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP12	PLANE	TUNGSTEN	5	58800	8.70
VP12	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP13	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP13	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP14	PLANE	TUNGSTEN	5	58800	8.70
VP14	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP15	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP15	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP16	PLANE	TUNGSTEN	5	58800	8.70
VP16	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP17	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP17	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP18	PLANE	TUNGSTEN	5	58800	8.70
VP18	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP19	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP19	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP20	PLANE	TUNGSTEN	5	58800	8.70
VP20	DIELECTRIC	ALUMINUM_NITRIDE	254	0	8.70
MP21	CONDUCTOR	TUNGSTEN	10	58800	8.70
VP21	DIELECTRIC	ALUMINUM_NITRIDE	750	0	8.70
BOTTOM	CONDUCTOR	TUNGSTEN	5	58800	8.70

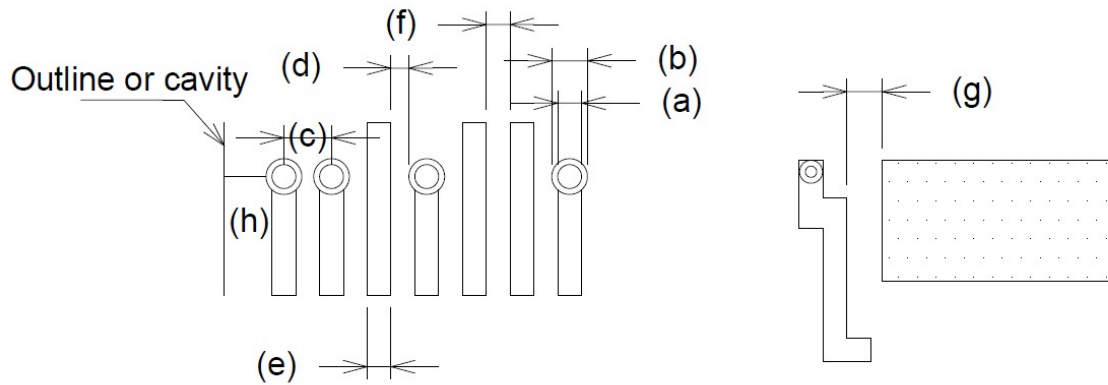
## Annexure I-C:



**Fig: Die in the cavity with tentative bond pad layout**

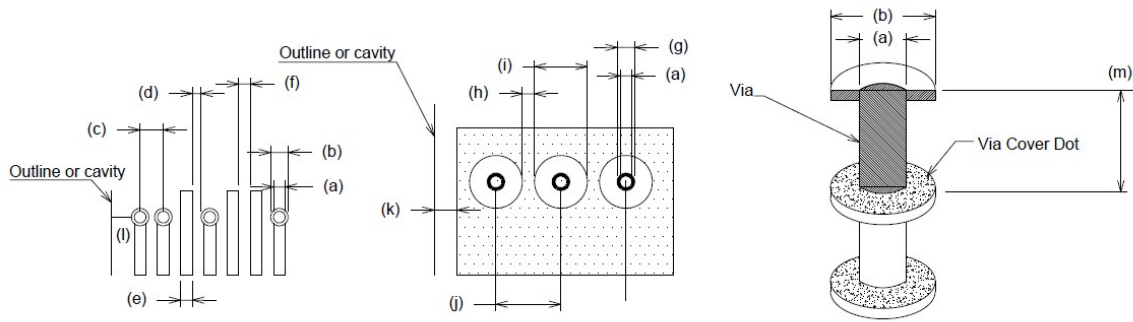
## Ceramic Package Design Constraints

### Surface Pattern Design Rule



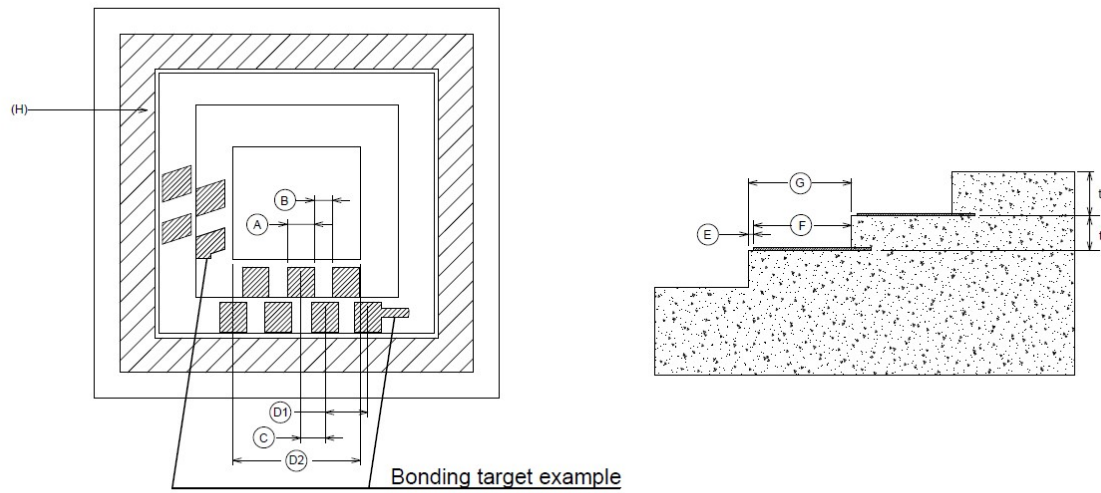
ITEM	Dimension in mm
(a) Via Hole Dia.	0.100
(b) Via Cover Dot Dia	0.250
(c) Via Center Spacing	0.254
(d) Via Cover Dot to line Clearance	0.1275
(e) Line width	0.100
(f) Line to Line clearance	0.100
(g) Line to plane	0.150
(h) Cavity to Pattern	0.200 Min
Outline to Pattern	0.500 Min

## Internal Pattern Design Rule



ITEM	Dimension in mm
(a)Via Hole Dia.	0.100
(b) Via Cover Dot Dia	0.150
(c) Via Center Spacing	0.254
(d)Via Cover Dot to line Clearance	0.127
(e)Line width	0.100
(f)Line to Line clearance	0.100
(g)Via Cover Dot Diameter (on plane)	0.150
(h)Line Width(on plane) (via anti pad to anti pad spacing)	0.100
(i) Clearance Dia/Via Anti pad	0.455
(j)Via Pitch (on plane)	0.560
(k)Out line or cavity to pattern(Gap inner layer pattern to outer) 50 mm over	0.500 (50 mm over) Under 50 mm: $((O/D \times 1\%)/2) + 0.25 \text{ mm}$
(L)Out line or cavity to Via (Outside edge to Via Center)	0.635
Route Keep-in/Keep-out	0.500
Gap (Inner layer pattern to cavity)	0.500

## Bond Finger Design Rule



(A) Pad Width	100um
(B) Pad Clearance	100um
(E) Pad Pull Back	127um
(F) Pad Length	773um
(G) Ledge Length	900um
(H) Seal Ring Pull Back	127 um



## Material Specifications for PGA Package

**1) Application:** These packages shall be used for hermetic sealing of CMOS IC or optical devices for high reliability applications.

- a) After die attach using Silver epoxy or Silver glass adhesive and Aluminium wire bonding, packages should be able to withstand Die shear and Destructive Bond Pull test as per MIL-STD-883.
- b) Also, after sealing with glass window or metal lid, these packages should be able to withstand following tests as per MIL-STD-883:
  - Thermal Shock: Method 1011, Condition C, 15 cycles
  - Thermal Cycling: Method 1010, Condition C, 100 cycles
  - Mechanical Shock: Method 2002, Condition B
  - Vibration: Method 2007, Condition A, 20g
  - Constant Acceleration: Method 2001, Condition C
  - Solderability: Method 2003,  $245 \pm 5^{\circ}\text{C}$
  - Lead Integrity: Method 2004
  - Seal Test - MIL -STD-883, Method 1004; Fine Cond A, Gross-Cond C
  - Stabilisation Bake, MIL-STD-883, Method 1008,  $150^{\circ}\text{C}$ , 1000 hrs.

## 2) Material

- a) Ceramic: Aluminium Nitride (AlN)
- b) Metallisation: Refractory metal; Tungsten or equivalent
- c) Pin: Kovar, Alloy-42 or equivalent
- d) Plating: Gold (99.9% minimum purity) per MIL-G-45204 over Nickel under plate

## 3) Dimensions

- a) As per finalised package drawing
- b) Flatness of Die Attach area & Seal Ring Area: As per finalised package drawing.
- c) Ceramic camber shall be 0.004" / inch maximum, not less than 0.002".

## 4) Visual acceptance criteria

At 10X magnification, package base shall present a clean appearance, free of loose foreign particles. Foreign particles which can be removed with blow of Nitrogen gas or dry air (30 psi) from a distance shorter than one inch may not be considered as foreign particles.

### a) Ceramic Area (other than seal ring)

i. Cracks	Not allowed
ii. Chip	a) maximum 30 x 30 x 60 mils b) Should not remove or expose any metallisation area.
iii. Flakes	Maximum 10 x 100 x 100 mils
iv. Bumps / Excess Material	On ceramic surface should not exceed 2 mils in height on bottom and 10 mils in height on any other surface
v. Foreign material / discoloration / stains / Gold on ceramic surface	On ceramic surface should not exceed 20 mils in size on the top or bottom of package and 50 mils in size on all sides.

b) Die Attach Area (if metallised)

i. Void / Peeling / Blistering / Foreign Material	<ul style="list-style-type: none"> <li>No defect larger than 10 mils</li> <li>Maximum of 3 defects between 3 to 10 mils in diameter with at least 30 mils distance between them.</li> </ul>
ii. Scratches	No scratch with Nickel underplate or base metal exposed.
iii. Near short	The distance between the die attach area and bond finger should not less than 50% of ceramic wall height.
iv. Bumps / Excess material	Maximum 1 mil in height should be allowed.

c) Wire bond finger area

i. Bumps / Excess material / Depression	Free from bumps / Excess material / Depression in critical bond area (2/3 the bond pad width, starting at 5 mil from tip of bond pad)
ii. Voids / Peeling / Blistering / Foreign Material	Free from Voids / Peeling / Blistering / Foreign Material in critical bond area (2/3 the bond pad width, starting at 5 mil from tip of bond pad)
iii. Scratches	No scratch with Nickel underplate or base metal exposed.
iv. Near short	Spacing between two bond fingers should not be less than 50% of the bond fingers spacing.

d) Seal Area

i. Chips / voids / peeling / blistering / foreign material	Should not be greater than 10 mils or 25% of width of seal ring (whichever is smaller)
ii. Scratches (if metallised)	No scratch with Nickel underplate or base metal exposed.
iii. Bumps / Excess material	1 mil maximum above seal area
iv. Pits / Depression	1 mil maximum on seal area
v. Near short (if metallised)	Spacing between seal ring and wirebond fingers should not be less than 50% of the ceramic wall height.

e) Pins

i. Alignment	100 % of entire diameter of pin should be on the braze pad.
ii. Braze fillet	Minimum 75% of braze fillet should be around the pin brazed on metallised pad.
iii. Braze pad near short	Spacing between pads should not be less than 50%.
iv. Pits / Scratches / Gouges	a) Should not be greater than 2 mils in depth. b) Should not expose the Nickel underplate or base metal.
v. Burrs / Rough Gold	Should not greater than 2 mils in height.

## 5) Plating:

- Gold plating thickness should be 60 micro inches minimum over 50 micro inches minimum thickness of Nickel plating. Gold plating must be done on all exposed metallised areas including die attach pad, wire bond fingers, package pins etc.
- There shall be no peeling / blistering / flaking when viewed under 10X magnification.
- Package bases after placing on a heater block at  $450^{\circ}\text{C} \pm 10^{\circ}\text{C}$  in air for about 60 seconds and after cooling shall not show discoloration visible to the naked eye and peeling / blistering / flaking at 10X magnification.
- Adhesion: Gold plating shall withstand peel off test using scotch tape.

- e) Solderability: To determine the solderability of package pins based on ability of these pins to be wetted or coated when dip soldered in tin lead eutectic solder. As per MIL-STD-883, Method 2003.

**6) Packing requirement:**

- a) Packages to be packed in trays and then in air tight / vacuum sealed Aluminium foil packing.
- b) The container should protect these packages against oxidation, dust, mechanical damage, spillage etc.

- 7) Vendor to provide manufacturer certificate of conformance to specifications along with manufacturer lot number and date of manufacture with the supplied material.

**8) Test Conditions:** Vendor shall provide compliance to following tests

- a) Electrical:
  - i) Insulation Resistance: Maximum leakage current 5 nA at 100V DC except between power plane and ground plane.
- b) Mechanical:
  - i) Pin Pull Test: A test for determining the integrity of pin-grid type package pin by measuring the capability of the package pins to withstand an axial force. As per MIL-STD-883, Method 2028.
  - ii) Pin Fatigue: To check resistance of package pins to metal fatigue. As per MIL-STD-883, Method 2004, Test Condition B2.
- c) Environmental:
  - i) Thermal Shock: To determine the resistance of the package to sudden exposure to extreme changes in temperature and the effect of alternate exposures to these extremes. Method 1011, Condition C, 15 cycles
  - ii) Thermal Cycling: To determine the resistance of a package to extremes of high and low temperatures, and to the effect of alternate exposures to these extremes. As per Method 1010, Condition C, 100 cycles
  - iii) Moisture Resistance: To determine the resistance of a package and constituent materials to the deteriorative effects of high humidity and heat conditions. As per MIL-STD-883, Method 1004 without initial pin conditioning and voltage application.
  - iv) Salt Atmosphere: An accelerated laboratory corrosion test simulating the effects of seacoast atmosphere on devices and package elements. As per MIL-STD-883, Method 1009, Condition A
  - v) Hermeticity of open cavity: As per MIL-STD-883, Method 1014

## **INSTRUCTION FOR ONLINE BID SUBMISSION**

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal i.e. <https://eprocure.gov.in/eprocure/app>, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirement and submitting their bids online on the CPP Portal.

### **REGISTRATION**

- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal([URL:https://eprocure.gov.in/eprocure/app](https://eprocure.gov.in/eprocure/app)) by clicking on the link “Online Bidder Enrolment” option available on the homepage. **Enrolment on the CPP Portal is free of charge.**
- (ii) During enrolment/registration, the bidders should provide the correct/true information including valid email id mobile no. All the correspondence shall be made directly with the contractors/bidders through email-id provided.
- (iii) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iv) Any bidder from a country which shares a land borders with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority as mentioned in the GFR2017 Rule144(xi).
- (v) For e-tendering possession of valid Digital Signature Certificate (Class III Certificates with signing key usage) is mandatory which can be obtained from SIFY /nCode/eMudra or any Certifying Authority recognized by CCA India one-Token/Smartcard.
- (vi) Upon enrolment on CPP Portal for e-tendering, the bidders shall register their valid Digital Signature Certificate with their profile.
- (vii) Only one valid DSC should be registered by a bidder. Bidders are responsible to ensure that they do
- (viii) Not lend their DSCs to others which may lead to misuse and should ensure safety of the same.
- (ix) Bidders can then login to the site through these credentials by entering their user ID/password and the password of the DSC/e-Token.

### **SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other key words, etc., to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents/ tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate

the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/ help from the Help desk.

#### **PREPARATION OF BIDS:**

- (i) For preparation of bid Bidders shall search the tender from published tender list available on site and download the complete tender document and should take into account corrigendum if any published before submitting their bids. After selecting the tender document same shall be moved to the 'My favorite' folder of bidders account from where bidder can view all the details of the tender document.
- (ii) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidders shall note the number of covers in which the bid documents have to be submitted, the number of documents- including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- (iii) Any pre-bid clarifications if required, then same may be obtained online through the tender site, or through the contact details given in the tender document.
- (iv) Bidders should get ready in advance the bid documents in the required format (PDF/xls/rar/dwf/jpg formats) to be submitted as indicated in the tender document/schedule.
- (v) Bidders can update well in advance, the documents such as experience certificates, annual report, PAN, EPF other details etc., under " My Space/ Other Important Document" option, which can be submitted as per tender requirements. This will facilitate the bid submission process faster by reducing up load time of bids.

#### **SUBMISSION OF BIDS:**

- (i) Bidder should login to the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay.
- (ii) While submitting the bids online, the bidder shall read the terms conditions (of CPP portal) and accepts the same in order to proceed further to submit their bid.
- (iii) Bidder shall digitally sign and upload the required bid documents one by one as indicated in the tender document.
- (iv) Bidders shall note that the very act of using DSC for downloading the tender document and uploading their offers is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.
- (v) **If price quotes are required in XLS format, utmost care shall be taken for uploading Schedule of quantities and Prices and any change/modification of the price schedule shall render it unfit for bidding.**  
**Bidders shall download the Schedule of Quantities and Prices i.e. Schedule-**

**A, in XLS format and save it without changing the name of the file. Bidder shall quote their rate in figures in the appropriate cells, there after save and upload the file in financial bid cover (Price bid) only.**

**If the template of Schedule of Quantities and Prices file is found to be modified/corrupted in the eventuality by the bidder, the bid will be rejected and further dealt as per provision of clause no 23.0 of ITB including for feature of EMD if any.**

- (vi) Bidders shall submit their bids through online e-tendering system of the Tender Inviting Authority (TIA) well before the bid submission end date time (as per Server System Clock). **The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.**
- (vii) After the bid submission (i.e. after Clicking “Freeze Bid Submission” in the portal), the bidders shall **take print out of system generated acknowledgement** number and keep it as a record of evidence for online submission of bid, which will also act as an entry pass to participate in the bid opening.
- (viii) Bidders should follow the server time being displayed on bidder’s dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid opening etc., in thee-tender system.
- (ix) All the documents being submitted by the bidders would be encrypted using PKI (Public Key Infrastructure) encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology.

#### **ASSISTANCE TO BIDDERS:**

- (i) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for attender or the relevant contract person indicated in the tender.
- (ii) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24X7 CPP Portal Helpdesk. The 24 x 7 Help Desk Number 0120-4200462,0120-4001002and0120-4001005.The help desk email id is [support-eproc@nic.in](mailto:support-eproc@nic.in)

## **INSTRUCTION FOR e-PROCUREMENT**

### **1. PREPARATION AND SUBMISSION OF BIDS:**

- a. The detailed tender documents may be downloaded from <https://eprocure.gov.in/eprocure/app> till the last date of submission of tender. The Tender may be submitted online through CPP Portal <https://eprocure.gov.in/eprocure/app>
- b. The bidder should submit the bid online in **Two Covers** as Technical bid in Cover-1 and Financial Bid in Cover-2 separately. Technical Bid and Financial Bid should be uploaded online in separate covers

### **2. SUBMISSION OF THE BID :** All interested eligible bidders are requested to submit their bids online on CPP Portal: <https://eprocure.gov.in/eprocure/app> as per the criteria given in this document:

- a. Technical Bid and Financial Bid should be upload online and cover should be placed online on the CPP Portal (<https://eprocure.gov.in/eprocure/app>).

### **3. Techno Bid and Financial BID:** Signed and Scanned copies of the bid documents as under must be submitted online on CPP Portal: <https://eprocure.gov.in/eprocure/app>.

- a) **List of Documents to be scanned and uploaded (Under Cover-1) within the period of bid submission: -**
  - i. Scanned copy of Bank details. (Bank details of principal supplier in case of Import shipments)
  - ii. Scanned copy of certificate of GST. (GST IN of Indian Agent in case of Import Shipments) (Not applicable in case of foreign vendor)
  - iii. Scan copy of tender acceptance letter.
  - iv. Scanned copy of specifications or brochures (if any).
  - v. Scanned copy of other document mentioned in tender document (if any)

### **4. Financial Bid**

In preparing the financial bids, bidders are expected to take into account the requirements and conditions laid down in this Tender document. The financial bids should be uploaded online as per the specified “.Xls” format i.e. Price Bid Excel sheet attached as ‘Xls’ with the tender and based on the scope of work, service conditions and other terms of the Tender document. It should include all costs associated with the Terms of Reference/Scope of Work of the assignment.

### **5. Last Date for Submission of Tender:**

- a. Online bids complete in all respects, must be submitted on or before the last date and time specified in the schedule of events.
- b. The SCL, S.A.S. Nagar may, at its own discretion, alter/extend the last date for submission of tender.

### **6. Bid Validity**

- a. The offer should be valid for a minimum period of 90 days from the date opening of Techno Commercial Bid. However, the quoted rates should be valid for the initial/extended period of order from the

effective date of PO/Contract. No request will be considered for price revision during the original Contract period.

- b. A bid valid for a shorter period shall be declared as non responsive.
- c. In exceptional circumstances, prior to expiry of the original time limit, SCL, Mohali may request the bidders to extend the period of validity for a specified additional period Beyond the original validity of 90 days. The request and the bidders responses shall be made in writing. The bidders, not agreeing for such extensions will be allowed to withdraw their bids without forfeiture of their Bid Security.

#### **7. Modification/Substitution/Withdrawal of bids:**

- a. No Bid shall be modified, substituted or withdrawn by the Bidder after the Bid's due Date.
- b. Any alteration/modification in the Bid or additional information supplied subsequent to the Bid's due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

#### **8. Rejection of the Bid:** The bid submitted shall become invalid if:-

- c. The bidder is found ineligible.
- d. The bidder does not upload all the documents as stipulated in the bid document.

#### **9. Evaluation of Price Bid:**

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

- a. Price quoted by the bidder in the price bid template is for meeting the functionalities given in the Tender and Technical Specifications sheet.
- b. In case quotations are submitted in foreign currencies, during preparation of price tabulation, Foreign Exchange(FE) conversion rate vis-a-vis Indian currency(INR) will be worked out on the basis of FE TT selling rate prevailing on the day of opening of technical bids.
- c. 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 as per prime landing rate of Reserve Bank of India (RBI) and added to the landed cost.
- d. In the event of the bidder requiring SCL to bear bank charges outside India (foreign bank charges), the bidders bid shall be loaded suitably on the quoted price towards bank charges outside India.
- e. In case, the price quoted is FCA/FOB/Ex-works, the charges towards Freight as quoted or a maximum of 5% of price quoted, Customs Duty taxes as applicable shall be taken in to account to arrive landed cost.
- f. Comparison between Indigenous Imported Offers: If both indigenous offers and imported offers are to be compared, 2% of the total landed cost of foreign offers shall be added towards charges for Customs clearance and local transportation for delivery at SCL.

## **INSTRUCTIONS TO TENDERERS AND TERMS and CONDITIONS OF TENDER**

1. Bid shall be submitted online only complying specified schedule.
2. GST and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown separately in the tender.
3. Prices are required to be quoted according to the units indicated in the annexed tender form. 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.
4. (a) 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.  
  
(b) 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.  
  
(c) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. 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.
5. 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 tenderers shall supply the same at the rates quoted.
6. The tenderer should supply along with his tender, the name of his/her banking details such as account no. IFSC Code etc.

## **TERMS and CONDITIONS OF TENDER**

### **1. DEFINITIONS:**

- (a) The term PURCHASER shall mean the President of India or his successors or assigns.
- (b) The Term CONTRACTOR/Vendor/Supplier 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, representative, heirs, executors and administrators unless excluded by the Contract.
- (c) The term STORES shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants and machinery and subsequent testing, should such a condition is included in the Purchase Order.
- (d) 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 or plant, machinery or equipment or part thereof.

## **2. PRICES:**

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

## **3. DESPATCH:**

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods dispatched. The consignment should be dispatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on said to contain basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

## **4. TEST CERTIFICATE:**

Wherever required, test certificates should be sent along with the dispatch documents.

## **5. ACCEPTANCE OF STORES:**

- (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.
- (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.
- (c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.
- (d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

## **6. REJECTED STORES:**

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

## **7. DELIVERY:**

- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either:
  - (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5 percentage per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10 percentage, or

- (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
- (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub clause (ii) and (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the repurchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such repurchase made against default. The manner and method of such repurchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such repurchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

#### **8. EXTENSION OF TIME:**

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages.

#### **9. RECOVERY OF SUM DUE:**

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

#### **10. INDEMNITY:**

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.

**11. COUNTER TERMS AND CONDITION OF SUPPLIERS:**

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.

**12. SECURITY FOR PURCHASE OF MATERIALS:**

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

## **General Terms & Condition for Foreign Vendors**

### **1. EMD**

- EMD where called for will have to be submitted by the participating bidder in the form and manner specified in the NIT so as to reach the purchaser at the address mentioned in the NIT on or before the due date and time mentioned in the NIT.
- Non receipt of EMD as per above, will result in rejection of bid without any reference to the bidder, except in cases given under Clause no. 2.3 below.
- The following categories of bidders are exempted from submission of EMD:
  - i) Bidders having valid registration with Directorate of Purchase and Stores, Department of Atomic Energy;
  - ii) Micro and Small Enterprises having valid registration with MSME or NSIC or Udyog Aadhaar in respect of procurement of goods and services, produced and provided by MSE and startups recognized by Department of Industrial Policy & Promotion (DIPP) are eligible for exemption according to government policies.
  - iii) Foreign Bidder directly submitting bid (not through their Indian Agent or Indian Counterpart or Indian subsidy) in the currency other than INR.
- Forfeiture of EMD
  - i) EMD shall be forfeited if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity of his bid.
  - ii) If the successful bidder fails to furnish the required Security Deposit, the EMD furnished shall be forfeited.
- REFUND OF EMD
  - i) EMD of unsuccessful bidders will be returned within thirty days after finalisation of the tender or after expiry of validity of their bid, whichever is later.
  - ii) EMD of successful bidders will be returned within thirty days of submission of security deposit as called for in the contract.

2. Bid /Open Authorization shall be submitted online only complying specified schedule and complete in all respects with technical specifications, including pamphlets and catalogues.

3. A Proforma Invoice may also be given which should contain the following information:

- a) The FOB/FCA value, the C and F value for import by Sea freight / Air freight up to and for air parcel post up to..... should be separately indicated.
- b) Agency Commission: The amount of commission included in the price and payable to the Indian Agent of the Contractor shall be paid directly to the Indian Agent by the Purchaser in equivalent Indian Rupees on the basis of an Invoice from him applying T.T.

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. This payment will be released to the Indian Agent immediately after Customs clearance of the goods in India.

- c) The Contractor shall invoice only for the net amount payable to deducting the amount of Agency Commission included in the invoice which will be paid to the Indian Agent directly by the Purchaser. However, the Contractors invoice should separately reflect the amount of commission payable to his Indian Agent.
  - d) The earliest delivery period and country of origin of the Stores.
  - e) Bankers name, address, telephone/fax Nos. and eMail ID of the Contractor.
- 4. The FOB/FCA and C and F prices quoted should be inclusive of all taxes, levies, duties arising in the tenderers country.
  - 5. Samples, if called for, should be sent free of all charges.
  - 6. Late and delayed tenders will not be considered. Quotations by cable must be followed by detailed offers.
  - 7. Offers made by Indian Agents on behalf of their Principals, should be supported by the proforma invoice of their Principals.
  - 8. Instructions / 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.
  - 9. The Purchaser reserves the right to accept or reject the lowest or any offer in whole or part without assigning any reason.
  - 10. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.
  - 11. a) Part shipment is not allowed unless specifically agreed to by us.  
  
b) As far as possible stores should be despatched by Indian Flag Vessels / Air India through any Agency nominated by us.
  - 12. Inspection / Test Certificate 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.
  - 13. For items having shelf life, those with maximum shelf life should be supplied if order is placed.

## **TERMS AND CONDITIONS**

### **1. DEFINITIONS:**

- (a) The term Purchaser shall mean the President of India 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 or equipment of part thereof.
- (d) The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order.

### **2. PRICES:**

Tenders offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

### **3. DEMURRAGE:**

If applicable, Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents to the bankers within a reasonable time (say within 10-12 days) from the date of bill of lading for sea consignments and within 34 days from the date of Air Way Bill for air consignments.

### **4. ADDRESS OF INDIAN AGENTS:**

.....

### **5. GUARANTEED TIME DELIVERY:**

The time for and the date of delivery stipulated in the Purchase Order shall be deemed to be the essence of the Contract. Delivery must be completed within the date specified therein.

6. INSPECTION AND ACCEPTANCE TEST:

- 6.1 The Purchaser representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractors premises the material and workmanship of all stores to be supplied under this Contract and if part of the said stores is being manufactured on other premises, the Contractor shall obtain for the purchasers representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractors premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.
- 6.2 For tests on the premises of the Contractor or of any of his sub Contractors, the Contractor shall provide free of cost assistance, labour, material, electricity, fuel and instruments as may be required or as may be reasonably needed by the purchasers representative to carry out the tests efficiently.
- 6.3 When the stores have passed the specified test, the purchasers representative shall furnish a certificate to the effect in writing to the Contractor. The Contractor shall provide copies of the test/s certificates to the purchaser as may be required.

7. MODE OF DESPATCH:

Generally, stores should be dispatched through Indian Flagged Vessel / Air India or through any other Agency nominated by the purchaser. A copy of the invoice and packing list should invariably be kept inside each of the packages.

8. PORT OF ENTRY: IGI airport New Delhi / Mumbai

9. CONSIGNEE: Purchase and Stores Officer, Stores,  
10. SHIPPING MARKS.

The mark on the shipping documents such as invoice, bill of lading and on the packages should be as follow:

PURCHASE ORDER NO. ....  
DATED .....  
SEMI CONDUCTOR LABORATORY  
GOVERNMENT OF INDIA

Destination: ..... and  
Port of Entry: .....

11. INSURANCE OF THE STORES:

The necessity or otherwise of insurance will be as indicated in the Purchase Order.

12. CONTRACTORS DEFAULT LIABILITY:

The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:

- 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.
- b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

13. In the event the Purchaser terminates the Contract in whole or in part, the Purchaser reserves the right to Purchase, upon such terms and in such a manner as he may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and/or for liquidated damages for delay as defined in Clause 19 until such reasonable time as may be required for the final supply of stores.

14.1 If this Contract is terminated as the Purchaser in addition to any other rights provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner and as directed by the Purchaser:

- a) Any completed stores.
- b) Such partially completed stores, drawing, information and Contract rights (hereinafter called manufacturing material) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores delivered to and accepted, by the purchaser and for manufacturing material delivered and accepted.

14.2 In the event the Purchaser does not terminate the Contract, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delay until the stores are accepted.

15. REPLACEMENT:

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.

16. REJECTION:

In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser. If the Contractor fails to do so, the purchaser may at his option either :

- a) replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or
- b) terminate the Contract for default, or
- c) acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchasers rights.

17. EXTENSION OF TIME:

If the completion of supply of stores is delayed due to reason of *force majeure* such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.

18. REQUIREMENT OF ADDITIONAL NUMBERS OF THE STORES ORDERED:

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.

19. LANGUAGE AND MEASURES:

All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English language. The metric system of measurement shall be used exclusively in the Contract.

20. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any patent, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent, Registration of design or Trade Mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the Contract.

21. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:

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.

22. SECURITY INTEREST:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

## **INSTRUCTIONS TO TENDERERS AND TERMS and CONDITIONS OF TENDER (For Indigenous Vendor)**

### **1. EMD**

- EMD where called for will have to be submitted by the participating bidder in the form and manner specified in the NIT so as to reach the purchaser at the address mentioned in the NIT on or before the due date and time mentioned in the NIT.
- Non receipt of EMD as per above, will result in rejection of bid without any reference to the bidder, except in cases given under Clause no. 2.3 below.
- The following categories of bidders are exempted from submission of EMD:
  - i) Bidders having valid registration with Directorate of Purchase and Stores, Department of Atomic Energy;
  - ii) Micro and Small Enterprises having valid registration with MSME or NSIC or Udyog Aadhaar in respect of procurement of goods and services, produced and provided by MSE and startups recognized by Department of Industrial Policy & Promotion (DIPP) are eligible for exemption according to government policies.
  - iii) Foreign Bidder directly submitting bid (not through their Indian Agent or Indian Counterpart or Indian subsidy) in the currency other than INR.
- Forfeiture of EMD
  - i) EMD shall be forfeited if the bidder withdraws or amends impairs or derogates from the tender in any respect within the validity of his bid.
  - ii) If the successful bidder fails to furnish the required Security Deposit, the EMD furnished shall be forfeited.
- REFUND OF EMD
  - i) EMD of unsuccessful bidders will be returned within thirty days after finalisation of the tender or after expiry of validity of their bid, whichever is later.
  - ii) EMD of successful bidders will be returned within thirty days of submission of security deposit as called for in the contract.

### **2. Bid /Open Authorization shall be submitted online only complying specified schedule.**

### **3. Late tenders and delayed tenders will not be considered.**

### **4. GST and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown separately in the tender.**

### **5. Prices are required to be quoted according to the units indicated in the annexed tender form. 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.**

6. (a) 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.
- (b) 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.
- (c) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. 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.
7. 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 tenderers shall supply the same at the rates quoted.
8. The tenderer should supply along with his tender, the name of his/her banking details such as account no. IFSC Code etc.

## **TERMS and CONDITIONS OF TENDER**

### **1. DEFINITIONS:**

- (a) The term PURCHASER shall mean the President of India or his successors or assigns.
- (b) The term CONTRACTOR/Vendor/Supplier 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, representative, heirs, executors and administrators unless excluded by the Contract.
- (c) The term STORES shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants and machinery and subsequent testing, should such a condition is included in the Purchase Order.

(d) 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 or plant, machinery or equipment or part thereof.

**2. PRICES:**

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

**3. DESPATCH:**

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods dispatched. The consignment should be dispatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on said to contain basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

**4. TEST CERTIFICATE:**

Wherever required, test certificates should be sent along with the dispatch documents.

**5. ACCEPTANCE OF STORES:**

- (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.
- (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.
- (c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.
- (d) If the whole or any part of the stores supplied are rejected in accordance with

Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

**6. REJECTED STORES:**

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

**7. DELIVERY:**

- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.
  - (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5 per centage per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10 per centage, or
  - (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
  - (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under subclause (ii) and (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the repurchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such repurchase made against default. The manner and method of such repurchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such repurchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

**8. EXTENSION OF TIME:**

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages.

**9. RECOVERY OF SUM DUE:**

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

**10. INDEMNITY:**

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the

**purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfilment of the contract.**

**11. COUNTER TERMS AND CONDITION OF SUPPLIERS:**

**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.**

**12. SECURITY FOR PURCHASE OF MATERIALS:**

**any Successful tenderer will have to furnish in the form of a bank guarantee or other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.**