

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
ISRO PROPULSION COMPLEX (IPRC)
MAHENDRAGIRI**

**Tender for SUPPLY OF HIGH SPATIO-TEMPORAL RESOLVED PHOTO
DETECTORS**

Bids to be submitted online

Tender No.: IPRC/PURGP2/IP202200132301 dated 23-01-2023

A. Tender Details

Tender No : **IPRC/PURGP2/IP202200132301**

Tender Date : **23-01-2023**

Tender Classification: **GOODS**

Purchase Entity : **PURGP2**

Centre : **ISRO PROPULSION COMPLEX (IPRC)**

SUPPLY OF HIGH SPATIO-TEMPORAL RESOLVED PHOTO DETECTORS

- 1.Foreign vendors are not permitted to quote.
- 2.Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid. Minimum percentage of Local content required to participate in the Bid is more than 20%
 - a. The percentage of local content should be specifically mentioned in the offer, without which it will be summarily rejected.
 - b. Preference will be given to Class-I Local Supplier and in their absence, Class-II Local Supplier will be considered.
3. MSME preference is applicable only against the claim of the manufacturer and production of documentary evidence by the manufacturer for the registration of particular item under MSME.
4. Last minute clarification on tenders will not be entertained.
5. This is an E Tender. Hence Postal/Fax/Email tenders will not be accepted.
6. Acceptance of Guarantee / Warranty, Security Deposit, PBG & LD Clause shall be specified in your Offer.

A.1 Tender Schedule

Bid Submission Start Date : **23-01-2023 15:50**

Bid Clarification Due Date : **13-02-2023 14:00**

Bid Submission Due Date : **20-02-2023 14:00**

Bid Opening Date : **20-02-2023 14:30**

B. Tender Attachments

NA

Instructions To Vendors

1. STANDARD TERMS AND CONDITIONS (DOS PM: 20)

1. 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.

2. 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 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%, 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) & (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 re-purchase or if there is an agreement to re-purchase 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 re-purchase made against default. The manner and method of such re-purchase 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 re-purchase 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.

3. DISPATCH:

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. ERECTION OF PLANT & MACHINERY:

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

5. 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 under clause 10 thereof.

6. GUARANTEE & REPLACEMENT:

- (a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
- (b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.
- (c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal 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 in this regard within the said period of 14 months from the date of acceptance thereof.
- (d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.
- (e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.
- (f) To fulfill guarantee conditions outlined in clause 4 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.
- (g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser site.
- (h) Even while the 12 months guarantee applies to all stores, in case where a greater period is

called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in para 4 (b) & (c) shall be the guarantee period plus two months.

7. PACKING FORWARDING & INSURANCE:

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.

8. 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.

9. REJECTED STORES:

Rejected stores will remain at destination at the Contractor 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.

10. SECURITY DEPOSIT(SD):

The Supplier shall provide Bank Guarantee for an amount equivalent to the 3% (Three PERCENT) of the total Order value towards Security Deposit for the due performance of the Purchase Order. The Security Deposit can be submitted in the form of Bank Guarantee (format enclosed) or Fixed Deposit receipt obtained from any Nationalized/ Scheduled Bank and it shall be kept valid for a period of sixty days beyond the date of completion of the Purchase Order. This Security Deposit will be returned to the Supplier only upon successful completion of all the contractual obligations or shall be adjusted/ forfeited against non-fulfilment of any of the contractual obligations. The Security Deposit shall be submitted within 30 days from the date of receipt of Purchase Order.

11. TEST CERTIFICATE:

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

12. The Purchaser shall mean the President of India or his successors or assigns.

2. GENERAL TERMS AND CONDITIONS

1. a) Facility of after sales service to be confirmed with details.

b) Permanent Account Number (PAN) allotted by Income-Tax authorities shall be furnished with documentary proof. Otherwise, documentary proof for having applied for PAN should be provided. Also PAN should be in the name of Company/Firm, if quoted by the Company/Firm and in the name of Individual, if quoted by individual.

c) GST No.

d) PAN No.

e) Local office in Tirunelveli / Nagercoil is preferable.

Note: (b) to (e) are applicable for Indian Companies only.

2. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.

3. GST where legally leviable and intended to be claimed should be distinctly shown separately in the tender.

4. Guarantee / Warranty period as applicable shall be indicated, along with the quote.

Guarantee/Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the contract/purchase order.

5. If an Indian agent submits bid on behalf of the Principal/OEM, the same Indian agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product

6. In a tender, either the Indian Agent on behalf of the Principal/OEM or Principal/ OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

7. In case of imported items (stores), Ex-Works/FOB/FCA prices should be indicated. In case of indigenous stores the quotation should be on FOR-Destination / Door delivery basis.

8. In case the vendor falls in the category of Small Scale Industries(SSIs), who are registered with NSI, Public Sector Undertakings (PSUs) and Micro & Small Enterprises (MSMEs) the same shall be mentioned in their quote for evaluation.

9. Indian Agents while quoting on behalf of their principals shall attach necessary authorization letter from their Principals along with the bid.

10. IPRC reserves the right to accept or reject any quotation in full or part thereof by recording the reasons.

11. IPRC shall not be responsible for failure of vendors in submitting bids online caused due to technical reasons at vendor end such as network or power failures, computer failure, internet-browser, mistakes / errors in filling the bids on line by vendor etc.

12. ISRO PROPULSION COMPLEX (IPRC) is partially exempted from payment of Customs Duty under Notification No. 50/2017-Customs dated 30.06.2017 and as amended by Notification No.5/18 Customs dt:25/1/18. For imported items IPRC will provide Customs Duty Exemption Certificate for availing Concessional CD and IGST.

13. Last minute request for the extension of the due date w.r.t. any technical issue at Vendors/Suppliers side will not be considered. You may submit your quotation online well in advance instead of waiting till the last date to ensure that Internet problem and network condition does not cause problem

14. LIQUIDATED DAMAGES: Delivery is the essence of the contract. Items shall be delivered within stipulated period. If delivery is delayed beyond the stipulated delivery period mentioned in the purchase order or any extension thereof, an amount equal to 0.5% per week shall be recovered, subject to a maximum of 10% of the order value shall be deducted from your bills due.

15. Offers sent through post, telegram, fax, e-mail, courier will not be considered. Partially completed / incomplete tenders shall not be considered.

16. Only authorized dealers/agents or their accredited representatives for original manufacturers have to submit the quotation with documentary evidence.

17. PAYMENT: 100% through RTGS within 30 days from the date of receipt and acceptance of items at our site is the normal payment for Indigenous supply. In the case of direct Import, normal terms of payment are by Sight Draft / Wire Transfer after receipt of items. However, other terms of payment like establishment of Letter of Credit may be considered by the Purchaser on such terms and conditions as may be agreed upon.

18. PERFORMANCE BANK GUARANTEE :

The Supplier shall guarantee the successful and satisfactory performance/commissioning of equipment/machinery under the conditions specified in the Purchase Order. As a performance security, the SUPPLIER shall furnish a performance bank guarantee (format enclosed) from Nationalized Bank/Scheduled Bank for an amount equal to the sum of 3% of the order value ensuring the due performance of equipment/machinery in accordance with all the specifications and terms specified in the Purchase Order herein valid for the warranty period. On due performance, the performance bank

guarantee shall be automatically cancelled and returned to the Supplier within 30 days after expiry of the Warranty period. The performance bank guarantee shall have claim period of six months.

19. SECURITY DEPOSIT : Security Deposit @ 3% of order value shall be submitted in the form of DD/FDR duly endorsed in favour of Accounts Officer, IPRC or by way of Bank Guarantee (in the prescribed format) within 20 days after receipt of order and valid up to the successful execution of the order.

20. The goods or material offered should be strictly as per our specifications. Change(s) in specifications, if any, should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials or equipment offered. Vague terms such as Best Indian, Best Indigenous and Imported make should not be used.

21. The offer should be valid for a minimum period of 120 days from the date of opening of the bids (Technical bid in case of 2-part tender).

22. 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.

23. Wherever the tenderer is asked to submit sample for evaluation of tenders, the same shall be submitted along with your quote.

3. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA

1. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

2. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border 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 i.e., Department for Promotion of Industry and Internal Trade (DPIIT).

3. Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

4. Model Certificate for Tenders

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered

5. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

4. Format for Self Certification under Preference to MAKE IN INDIA Policy CERTIFICATE

1. In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, as amended from time to time and as applicable on the date of submission of tender, we hereby certify that we M/s. _____(supplier name) are local supplier meeting the requirement of minimum percentage of Local content _____ (class I/Class II) as defined in above orders for the materials against Tender No. _____

2. Details of locations at which local value addition will be made is as follows:

3. We also understand, false declarations will be in breach of the Code in Integrity under Rule 175(1) (i) (h) of the General Financial Rule for which a bidder or its successors can be debarred for up two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

4. Seal and Signature of Authorized Signatory

5. GeM Seller ID

1. GeM Seller Registration: All vendors shall register themselves in GeM Portal (gem.gov.in) and provide GeM Seller unique ID in the tender documents, as this ID is mandatory for award of contract.

C. Bid Templates

C.1 Technical Bid - SUPPLY OF HIGH SPATIO-TEMPORAL RESOLVED PHOTO DETECTORS

1. Opto Mechanical Hardware

High spatio-temporal resolution photo detectors

Item specifications for Opto Mechanical Hardware

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Spectral range of sensor	400-680 nm	Yes / No / Explain		
2	Spatial resolution area	11 x 11 microns ² per element	Yes / No / Explain		
3	Full resolution	2016 x 2016 elements in sensor	Yes / No / Explain		
4	Shutter mode	Global shutter	Yes / No / Explain		
5	Sensitivity	160 - 6400 (colour) In ISO	Yes / No / Explain		
6	Sensor type	CCD/ CMOS type	Yes / No / Explain		
7	Quantum efficiency	50% max	Yes / No / Explain		
8	full well capacity	36000 e-	Yes / No / Explain		
9	Dark current	530 e- per element	Yes / No / Explain		
10	Exposure time	40 ms maximum to 1.2 micro sec tunable	Yes / No / Explain		
11	Dynamic range	12 bit	Yes / No / Explain		
12	Mount	F type mount	Yes / No / Explain		
13	Connector	LEMO (18 pin) type	Yes / No / Explain		
14	Multi instrument sync	Ext. Sync + PLL Sync	Yes / No / Explain		

15	Internal memory of device	9GB minimum	Yes / No / Explain		
16	Power supply	15-48V DC	Yes / No / Explain		
17	Data repetition rate	a)1102 SPS at 2016 x 2016 resolution (max) with recording time of 1.40 s b) 1443 SPS at 2016 x 1536 resolution(max) with recording time of 1.4 sec minimum c) 10782 SPS 528 x 528 resolution with recording time 2.08 s	Yes / No / Explain		
18	ROI	24 x 4 centered	Yes / No / Explain		
19	Data interface	Giga bit ethernet	Yes / No / Explain		
20	Output signals	Exposure status, standby mode, busy mode	Yes / No / Explain		
21	Time resolution in data	@ 1 micro second	Yes / No / Explain		
22	photo detector dimension	< 120mm in all axis	Yes / No / Explain		
23	mass of photo detector	<1kg	Yes / No / Explain		
24	Operating range	0 to 40 deg C	Yes / No / Explain		
25	Time code input	IRIS-B un modulated	Yes / No / Explain		
26	Photo response non-uniformity	<1% @ 80% exposed signal	Yes / No / Explain		
27	Time Synchronisation	External through TTL pulse	Yes / No / Explain		

Document : Specification for Photo detectors

2. Opto Mechanical Hardware

Pulsed delay generator

Item specifications for Opto Mechanical Hardware

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Pulse repetition rate	0.001 Hz to 10,000 Mhz	Yes / No / Explain		
2	Resolution	2 micro second	Yes / No / Explain		
3	Accuracy of pulse	Similar to time base	Yes / No / Explain		
4	Jitter in pulse	50 pico sec	Yes / No / Explain		
5	No of channels	8 output channels	Yes / No / Explain		
6	Output impedance	High	Yes / No / Explain		
7	Pulse width range	10 ns to 1000s	Yes / No / Explain		
8	Delay range	Upto 1000 s	Yes / No / Explain		
9	RMS jitter	200 pico speed	Yes / No / Explain		
10	Pulse inhibit delay	120 ns	Yes / No / Explain		
11	TTL Rise time	3ns	Yes / No / Explain		
12	Overshoot	<100 mV + 10% of pulse amplitude	Yes / No / Explain		
13	Communication ports	USB/ RS 232	Yes / No / Explain		
14	Global gate/ trigger	2 Nos	Yes / No / Explain		
15	External clock	10 MHz – 100 MHz	Yes / No / Explain		
16	Rise time	<3 ns (2 ns typical range)	Yes / No / Explain		
17	Jitter – channel to channel	50 ps RMS	Yes / No / Explain		
18	Output level	4.0 V typical in 50 ohms	Yes / No / Explain		
19	Time for rise in command	<3 ns	Yes / No / Explain		
20	Slew rate of signals	0.5 V/ns	Yes / No / Explain		

Supporting Documents required from Vendor

- 1. Detailed document specifying the working principles of shall be supplied**
- 2. Detailed drawings of parts shall be supplied while quoting**

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Detailed maintenance manual and trouble shooting manual to be supplied	Yes / No / Explain	
2	Detailed drawings of hardware to be supplied	Yes / No / Explain	
3	Warranty certificate shall be part of standard supply	Yes / No / Explain	
4	Validity of Offer (specify)	Yes / No / Explain	
5	Delivery Period (specify)	Yes / No / Explain	
6	Delivery Terms: Normal delivery terms - FOR Destination (i.e., IPRC, Mahendragiri)	Yes / No / Explain	
7	Payment Terms: 100% within 30 days after receipt and acceptance of items (No advance payment is acceptable). Specify your Payment Terms.	Yes / No / Explain	
8	Security Deposit: The Supplier shall provide Bank Guarantee for an amount equivalent to the 3% (THREE PERCENT) of the total Order value towards Security Deposit for the due performance of the Purchase Order. The Security Deposit can be submitted in the form of Bank Guarantee or Fixed Deposit Receipt obtained from any Nationalized/ Scheduled Bank and it shall be kept valid for a period of sixty days beyond the date of completion of the Purchase Order. This Security Deposit will be returned to the Supplier only upon successful completion of all the contractual obligations or shall be adjusted/ forfeited against non-fulfilment of any of the contractual obligations. The Security Deposit shall be submitted within 30 days from the date of receipt of Purchase Order.	Yes / No / Explain	
9	Confirm: Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA	Yes / No / Explain	

10	Liquidated Damages: The delivery period / completion period shall be the essence of the Purchase Order. If the Supplier fails to meet delivery date within the time specified above or any extension thereof, the Department will recover from the Supplier as Liquidated Damages (LD) a sum of 0.5% of the total order value for each calendar week of delay subject to a maximum of 10% of the total order value. Confirm your acceptance.	Yes / No / Explain	
11	Name of PRINCIPAL, Address, Contact No, E-mail Id etc. (specify):	Yes / No / Explain	
12	Currency quoted (specify)	Yes / No / Explain	
13	Warranty / Guarantee Period: (specify)	Yes / No / Explain	
14	Taxes and other costs, if any: (Specify).	Yes / No / Explain	
15	Performance Bank Guarantee: Performance Bank Guarantee (PBG) for 3% of the order value shall be submitted along with your Invoice/prior to final payment. It shall be valid till the warranty/ guarantee period and shall have an additional claim period of 60 days.	Yes / No / Explain	
16	Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid. Percentage of Local Content for the offered item / items shall be specified	Yes / No / Explain	
17	MSME preference is applicable only against the claim of the manufacturer and production of documentary evidence by the manufacturer for the registration of particular item under MSME.	Yes / No / Explain	
18	Bank Details (State Bank of India, Mahendragiri, Tirunelveli (Dist) - 627 133) Details of your bank shall be furnished.	Yes / No / Explain	
19	Percentage of Local Content	Yes / No / Explain	
20	Any other terms	-	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	Opto Mechanical Hardware High spatio- temporal resolution photo detectors	1.00 Nos.		-		
2	Opto Mechanical Hardware Pulsed delay generator	1.00 Nos.		-		