

## Tender Details

**Tender No:** PRL/PURCHASE/2018E0070101

**Tender Date:** 31/01/2018

**Purchase Entity:** Physical Research Laboratory

## Tender Notice

PHYSICAL RESEARCH LABORATORY (PRL)

A Unit of Dept. of Space, Govt. of India

Navarangpura, Ahmedabad 380 009, (Gujarat), INDIA.

Tel: 91-79-2631 4113/4112/4119, FAX: 91-79- 26314910

Email: [purchase@prl.res.in](mailto:purchase@prl.res.in) , Web: [www.prl.res.in](http://www.prl.res.in)

INVITATION FOR BIDS

E-Procurement Tender Notification No.PRL/PURCHASE/GT-04/17-18 Dated 13-02-2018

The Director, Physical Research Laboratory, Ahmedabad invites bids in Two parts i.e. (Part I Technical Bid and Part-II Price bid) for the supply, installation, testing and commissioning of item/equipment listed below:

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E-Procurement File No.

PRL/PURCHASE/2018E0070101

Description of items/ equipment

Black Thinned And Deep Deplation 4k x 4k

Quantity

1 No.

Interested Bidders may obtain further information including Technical Specifications, Tender Documents, Submission Forms and all other relevant information with terms and Conditions of bidding from our website <https://www.prl.res.in> and [www.isro.gov.in](http://www.isro.gov.in) under link Business with PRL „<sup>3</sup>Tenders / Contracts and Tender Notices respectively.

There is no fee for Tender Document/s.

On line bid submission :

The interested bidders must submit their offer on Line by registering their firms under E-procurement within the Due date and time. The concerned Web link for E-Procurement is <https://eprocure.isro.gov.in/isro/index.asp>? For vendor registration supplier has to have digital certificate and non public domain email id.

This is a two stage process. After submission of bid, bidder has to give open authorization also. Digital Certificate is to be used at every stage of Submission i.e. Open authorization and Opening of the Bids. Accordingly interested bidders are requested to visit the above web link and read the instructions carefully to ensure that the bids are submitted correctly and open authorization is confirmed at appropriate time. Bids of those bidders who have completed above two steps will only be opened. Please note that time slot for various activities for E-Procurement is to be followed rigidly.

For any problem during the process of bidding online, bidders may contact help line as mentioned on E procurement website i.e. at 9167969601 during working hours as per Indian standard time.

Suppliers are requested not to wait till last date for submission of Open Authorization and Bid Submission as Technical Support shall be available only on working days during working hours and any delay shall result in Invalid Bid.

Suppliers are NOT required to submit hard copy of bids.

Schedule of tendering :

Last date for online bid submission : 22-03-2018 23:00 hrs ( IST)

Last date for online open Authorization : 02-04-2018 23:00 hrs ( IST)

Date and time for Technical bid opening : 03-04-2018 14:00 hrs ( IST)

Supplier can attend Technical Bid Opening with prior intimation.

The Price Bids of only those technically qualified bidders will be opened for which Date and Time will be informed separately.

In the event of the date specified for bid opening being declared as a closed holiday for purchaser's office, the due date for bid opening will be the following working day at the appointed time.

The Director, PRL, Ahmedabad reserves the right to accept any or all tenders either in part or in full or to split the order without assigning any reasons thereof. The Director, PRL also reserves the right to reject any bid and annul the bidding process at any time prior to award of contract, without assigning any reasons and there by incurring any liability to the affected bidder or bidders.

Soft copy of Tender Terms are also uploaded in pdf format on our website.

Registrar, PRL

## **Tender Attachments**

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

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

IDT0014460000000000isro05401.pdf

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

IDT0014460000000000isro05402.pdf

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

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

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

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

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#### **I. INSTRUCTIONS TO TENDERERS**

The Tenderers should submit quotations online complete in all respects with technical specifications, including pamphlets and catalogues.

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

FOR QUOTATION IN FOREIGN CURRENCY :Supplier has to submit offer only on EX WORKS / FOB / FCA basis duly packed for air / sea transportation as applicable. We shall add 5% freight charges on this cost and 2% on this cost for custom clearance. We shall add duty (notional) to arrive at PRL landed cost.

FOR QUOTATION IN INDIAN RUPEES : Supplier has to be submit offer only on Free on Road – PRL Ahmedabad only. If supplier has quoted imported items and informs PRL to pay duty, it shall be added as mentioned above i.e. notional duty shall be added in quoted price.

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.

The Contractor shall invoice only for the net amount payable to him, after deducting the amount of Agency Commission included in the invoice which will be paid to the Indian Agent directly by the Purchaser. However, the Contractor's invoice should separately reflect the amount of commission payable to his Indian Agent.

The earliest delivery period and country of origin of the Stores.

Banker's name, address, telephone/fax Nos. & e-Mail ID of the Contractor.

The approximate net and gross weight and dimensions of packages / cases.

Recommended spares for satisfactory operation for a minimum period of one year.

Details of any technical service, if required for erection, assembly, commissioning and demonstration.

The FOB/FCA and C & F prices quoted should be inclusive of all taxes, levies, duties arising in the tenderer's country.

The offer should be valid for a minimum period of 120 days from the due date of opening of the tender.

Samples, if called for, should be sent free of all charges.

Late and delayed tenders will not be considered.

Offers made by Indian Agents on behalf of their Principals, should be supported by the proforma invoice of their Principals.

The details of Import Licence will be furnished in the Purchase Order.

The authority of person signing the tender, if called for, shall be produced.

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.

The Purchaser reserves the right to accept or reject the lowest or any offer in whole or part without assigning any reason.

It is expressly agreed that the acceptance of the Stores Contracted for is subject to final approval in writing by the Purchaser.

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.

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

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

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

## II. TERMS AND CONDITIONS

### DEFINITIONS:

The term 'Purchaser' shall mean the President of India or his successors or assignees.

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 Contractor's Successors, representatives, heirs, executors and administrators unless excluded by the Contract.

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.

The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order.

### 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.

#### TERMS OF PAYMENT:

Being a Department of the Government of India, the normal terms of payment are by Sight Draft. 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.

The Sight Draft / Letter of Credit will be operative on presentation of the undermentioned documents:

Original Bill of Lading / Airway Bill

Commercially certified invoices describing the stores delivered, quantity, unit rate and their total value, in triplicate. The invoice should indicate the discounts, if any, and Agency Commission separately.

Packing List showing individual dimensions and weight of packages.

Country of Origin Certificate in duplicate.

Test Certificate.

Declaration by the Seller that the contents in each case are not less than those entered in the invoices and the quality of the Stores are guaranteed as per the specifications asked for by the Purchaser.

#### IMPORTANT LICENCE:

Reference to Import License No. & date and Contract number & date shall be prominently indicated in all the documents vide para 3.2

#### DEMURRAGE:

Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents as prescribed in para 3.2 to the bankers within a reasonable time (say within 10-12 days) from the date of bill of lading for sea consignments and within 3-4 days from the date of Air Way Bill for air consignments.

ADDRESS OF INDIAN AGENTS:

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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.

INSPECTION AND ACCEPTANCE TEST:

The Purchaser's representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractor's 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 purchaser's representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractor's premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.

For tests on the premises of the Contractor or of any of his subContractors, 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 purchaser's representative to carry out the tests efficiently.

When the stores have passed the specified test, the purchaser's 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.

MODE OF DESPATCH:

Generally, stores should be despatched 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.

PORT OF ENTRY:

Ahmedabad/Mumbai

CONSIGNEE:

Purchase & Stores Officer, Stores, Physical Research laboratory, Navrangpura,Ahmedabad-380009, India

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 .....

GOVERNMENT OF INDIA

A UNIT OF DEPARTMENT OF SPACE

PHYSICAL RESEARCH LABORATORY

NAVRANGPURA, AHMEDABAD-380009, INDIA

Destination: ..... & Port of Entry: .....

INSURANCE OF THE STORES:

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

**CONTRACTOR'S 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:

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.

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

In the event the Purchaser terminates the Contract in whole or in part as provided in Clause 14 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.

If this Contract is terminated as provided in Clause 14 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:

Any completed stores.

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.

In the event the Purchaser does not terminate the Contract as provided in Clause 14, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delay as set out in Clause 19 until the stores are accepted.

#### 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.

#### 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 –

replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or

terminate the Contract for default as provided under clause 14 above, or

acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchaser's rights under clause 19.

#### 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.

#### DELAY IN COMPLETION / LIQUIDATED DAMAGES:

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 Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.

#### GUARANTEE & REPLACEMENT:

The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down for material, workmanship and performance.

For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein are found to have developed under proper use arising from faulty materials, 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 parts thereof are faulty.

If in the opinion of the purchaser it becomes necessary to replace or renew any defective stores, such replacements or renewals 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.

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.

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 defects 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.

To fulfill guarantee conditions outlined in Clause 20 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser - Bank Guarantee format enclosed) 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.

All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of stores at purchaser's site.

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, and in such cases, the period of 14 months referred to in Clause 20 (b) and (c) shall be asked for guarantee period plus two months.

**21 REQUIREMENT OF ADDITIONAL NUMBERS OF THE STORES/SPARE PARTS 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.

**PACKING:**

The Contractor wherever applicable shall pack and crate all stores for sea / air shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail or sea for space qualified stores. The Contractors shall be held responsible for all damages due to improper packing.

The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.

The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.

The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.

Transshipment of equipment shall not be permitted except with the written permission of the purchaser.

Apart from the despatch documents negotiated through Bank, the following documents shall also be airmailed to the purchaser within 7 days from the date of shipment by sea and within 3 days in case of air-consignments:

Commercial Bill of Lading / Air Way Bill / Post parcel Receipt. (Two non-negotiable copies)

Invoice (3 copies)

Packing List (3 copies)

Test Certificate (3 copies)

Certificate of Origin.

The Contractor shall also ensure that one copy of the packing list is enclosed in each case.

#### ARBITRATION:

If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India.

#### 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.

#### 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.

#### 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.

#### 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.

#### BANK CHARGES:

While the purchaser shall bear the bank charge payable to his Bankers (State Bank of India), the Contractor shall bear the Bank charges payable to his Bankers including the cheques towards advising amendment commissions.

#### TRAINING:

The Contractor shall, if required by the purchaser, provide facilities for the practical training of Purchaser's engineering / technical personnel from India and for their active association on the manufacturing processes throughout the manufacturing period of the Contract / stores, number of such personnel to be mutually agreed upon.

#### APPLICABLE LAW:

The Contract shall be interpreted, construed and governed by the laws of

India.

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## Bid Templates

### 4k \* 4k ccd Compliance Matrix

#### Item Specifications

Sl. No	Specifications	Compliance (Yes /No)	Offered Specifications	Remarks
1	CCD Type :Black thinned and deep depletion type which suppresses fringing at longer wavelengths between 600 nm to 1000 nm, grade 1 sensor			
2	Pixels :4096 * 4112			
3	Pixel Size : 15 * 15 micrometer			
4	Image Area :61.4 * 61.7mm with 100% fill factor			
5	Operating Temp :- 100C(+or-)0.05C or better precision using 5 stage TEC and Closed cycle water			

	flow at 10C to 20C			
6	Well depth: >350000 electrons			
7	Dark current :<0.0008 electrons/pixel/sec at -100C			
8	Read Noise:2-3 electron at 100 kHz and 4-6 electron at 1MHzLinearity:Better than 99%			
9	Outputs:Quad or Single. Simultaneous 4 read-out ports should be operable, so that total readout time is about 38sec when reading in this 4 port simultaneous readout mode at 100kHz			
10	Quantum Efficiency:380 nm jÝ 80%, 400 nm to 800 nm jÝ 88%, 900 nm jÝ50% and 1000 nm jÝ 10%. QE measure values at 400 nm, 500 nm, 600 nm and if possible 800 nm must be measured and on the			

	actual sensor which the vendor will be procuring from CCD manufacturing company and should be shared with PRL			
11	Digitization:16-bit at all speeds(100kHz, 500kHz,1MHz & 3MHz) and 18-bit at 100 kHz,500 kHz and 1MHz			
12	Full Electronics warranty :5 Year from the date of delivery at PRL(Standard(1) +Extended(4))			
13	Sensor Characterisation:Full Characterization of the CCD performance with graphs clearly showing the linearity curve with respect to photons falling on the curve vs. measured ADU, Both Dark and light Images of the CCD clearly showing that the CCD array satisfies Grade 1 category, certificate from			

	<p>e2v also should be included for the same, read noise measurements at read out speeds both at 16 and 18bits and gain measurements (ADU to electrons conversion rate) for all the four readout ports (situated at the four corners of the CCD sensor array). All these measurements have to be done at -100C.</p>			
14	<p>15Dewar/Cryogenic Housing :The CCD array must be housed inside a vacuum Dewar with hematic metallic sealing at ultra-high-vacuum (10e-7mbar "C 10e-10mbar), with warranty of 10 years for vacuum performance. Dewar working environment temperature -5C to 30C and surviving environment temperature -10&amp;#8304;C to 45&amp;#8304;C. Humidity factor up to 70%. Vendor</p>			

	<p>should discuss with PRL as to how to avoid condensation on the outer surface of the window (at window "C air interface) due to Humidity. Before fabrication of the mechanical Dewar, the Vendor must share the details of the drawings with PRL and after to clearance from PRL, will proceed for fabrication. Shutter (Operating Temp: -5C to 30C and Survival Temp: -30C to 45C) and dimension is such that clear aperture should be minimum 100mm. Minimum exposure time 10millisec and maximum exposure time of 3600secs should be possible.</p>			
15	<p>Cryogenic cooling Peltier cooling 5 stage with water circulation at 10C using a separate water chiller. The water pipes need to be</p>			

	<p>least 25m length and the pipes should be Teflon or similar make and flexible which can take many bends. The water Chiller &amp; Pump along with pipes are included in the scope of the vendor to supply. Time to reach -100°C ±0.05°C from the start of the TEC and Chiller system shall be within 60mins. Total Weight: 12 ± 1 kg Length: 260 ± 10mm Diameter: 200 ± 10mm</p>			
16	<p>Power: Connection to camera control unit. Power requirement: 100-240Vac, 50/60Hz Power Consumption: 240V, about 500 Watt</p>			
17	<p>Operating and Storage Conditions': Operating Temp: -5C to 30C ambient Operating altitude: Up to 4500m Relative Humidity during operation: up to</p>			

	70%, during survival/storage up to 90%(non condensing)Storage/Survival Temp: -30C to 40C			
18	<p>Connectivity:1.USB 3.0, this cable must be at least 5m long.2.TTL/Logic :Connector type: SMB, provided with SMB to BNC cable Fire(Output), External Trigger (Input), Shutter (Output)3.I2C Compatible with Fisher SC102A054-130 Shutter(TTL), I2C Data, I2C Clock, +5Vdc, Ground4.Fiber Optic :Long distance connection via LC fiber optic I/O connection of length 100meters is required5.IRIG to C B:Compatible with IRIG-B standard (GPS with 10ms Resolution)6.Water Cooling: Connection to recirculatory or other water/liquid cooling system of at least 25m</p>			

	long.			
19	<p>Software compatibilityA plug &amp; play software should be made available operating under Windows systems in addition to the following requirements:1.Drivers should be provided so that CCD camera can be operated through Large Variety of third party imaging packages of our choice2.Software features imaging should have a 32-bit and 64-bit enabled application for Windows (7, 8 and 10) Linux and LabVIEW, offering functionality for data acquisition and processing. This should include CCD characterization measurements, like dark current, CCD read noise and gain, and region of interest operation (reading out a small region of the CCD at a much faster</p>			

	<p>rate).3.A software development kit that allows to control the CCD camera from our own application. Available as 32 and 64bit libraries for Windows (7, 8 and 10), compatible with C/C++, C#, Delphi, VB6, VB.NET, LabVIEW and MATLAB. Linux SDK compatible with C/C++</p>			
20	<p>DeliverySchedule:10-12 months from the date of the receipt of the work order. Once the order is received the Vendor must reconfirm the all the specs to be delivered to PRL and Vendor should also share all the details of the CCD sensor including its specs which they are going to install inside the Dewar. Only after i°YESi± from PRL they should install the sensor array.</p>			

### Vendor Specified Terms

Description	Vendor Terms
NAME, ADDRESS, PHONE, FAX, EMAIL OF THE COMPANY ON WHICH ORDER IS TO BE PLACED ON	
DELIVERY TERM WE PREFER EX WROKS/ FOB / FCA / CIF / CPT / DDU / DDP / DAPEX WORKS FOR QUOTATIONS IN FOREIGN CURRENCY / F.O.R. PRL AHMEDABAD FOR QUOTATIONS IN INDIAN RUPEES	
DELIVERY PERIOD IN NO. OF DAYS FROM DATE OF ORDER	
PAYMENT TERM WE PREFER SIGHT DRAFT / WITHIN 30 DAYS AFTER RECEIPT, INSTALLATION AND ACCEPTANCE / LETTER OF CREDIT WITH ALL CHARGES TO SUPPLIERS ACCOUNT	
COUNRTY FROM WHERE MATERIAL WILL BE DISPATCHED	
CURRENCY OF QUOTATION	
MODEL NO., NAME OF MANUFACTURER OF EACH OF THE PRODUCT QUOTED	
MODE OF DISPATCH I.E. BY AIR OR BY SEA	
INFORMATION FOR RELEASING PAYMENT BY WIRE TRANSFER LIKE BANK NAME, ADDRESS, PHONE, FAX, SWIFT CODE, ACCOUNT NO., IBAN NO., ANY OTHER INFORMATION	
WARRANTY PERIOD WE PREFER WARRANTY PERIOD WILL START FROM DATE OF INSTALLATION	

Any other Terms	
CONTACT PERSON WITH MOBILE NO. LANDLINE NO. AND E-MAIL ID.	

**Supporting Documents from Vendor**

**Attachment - I:**

**Attachment - II:**

**COMMERCIAL COMPLAINE SHEET PRL IMPORT**

**COMMERCIAL COMPLAINE SHEET PRL IMPORT**

<b>PRL TERMS</b>	<b>MENTION AGREE OR DISAGREE</b>
1.The supplier has read all the terms and conditions including Term No. 19 & 20 , LD (Late Delivery) Clause and PBG (Performance Bank Guarantee) Clause and accepts them unconditionally.	
2.PRL will issue custom duty exemption certificate under 51 / 96 OR excise duty exemption whichever is applicable.	
3.Supplier confirms that price is not shown in any part of technical bid. The Supplier has read and understood the scope of each template, i.e.,	

whether it is part of Technical Bid or Commercial Bid.	
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**COMMERCIAL COMPLAINT SHEET PRL IMPORT**

**Price Bid Form**

Item Description	Slab Range	Qty	UOM	Currency	Unit Price	Total Price
CCD camera Black thinned and Deep Depletion 4k*4k CCd with cryogenics for Custom design PRL Wide Field Camera	-	1	NOS	-	-	-

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

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

**PRICE BID RELATED INFORMATION PRL IMPORT**

**PRICE BID RELATED INFORMATION PRL IMPORT**

PRICE BID RELATED INFORMATION	PRICE BID RELATED INFORMATION FROM SUPPLIER SIDE
<p>This additional space is provided for vendors to write only price bid related information which could not be provided anywhere else. Do not duplicate any information here; do not write any technical information. Keep it short and clear. Confusing bid is liable for rejection.</p>	
1.	
2.	
3.	
4.	
5.	

**PRICE BID RELATED INFORMATION PRL IMPORT**