प्लाज़्मा अनुसंधान संस्थान
INSTITUTE FOR PLASMA RESEARCH
परमाणु ऊर्जा विभाग, भारत सरकार का एक सहायता प्राप्त संस्थान
An Aided Institute of Department of Atomic Energy, Government of India

इन्दिरा पुल के पास, भाट, गांधीनगर - 382 428 भारत
दूरभाष: (079) 2396 2020/2021/2028
फैक्स: 91-079-23962277
वेब: www.ipr.res.in

NEAR INDIRA BRIDGE, BHAT
DIST. GANDHINAGAR - 382 428 (INDIA)
Phone: (079) 2396 2000/2026/2332
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ENQUIRY

ENQUIRY NO : IPR/EQF/18-19/200
Date : 06-02-2019

Due on : 18-04-2019 by 1:00 PM IST

Reminder-1 Dt: 15-03-2019

Please send your offer in sealed envelope specifying Enquiry No, Date & Due Date, ALONG WITH your credentials for the following items which we are interested to import directly against Foreign Trade Policy 2015-2020.

Important Note:

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to importpurchase@ipr.res.in

Please ensure your sealed quotation reaches this office not later than above mentioned due date and time.

Kindly go through the following documents properly before quoting which are available on the IPR web portal i.e., http://www.ipr.res.in/documents/tender_terms.html / attached herewith.

1) Instructions to the bidders & Terms and conditions (refer Form No: **IPR-FP-01.V3**)
2) Bidding format

GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS): Please refer **clause no: 14** of Form No: **IPR-FP-01.V3**

QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	Schlieren Imaging System (Detail specifications attached)	1.0 Nos.

Note: 1.Please quote with complete technical details (Technical compliance sheet and product data sheet).
2.TDS as per CGST Act: As per provisions of section No. 51 of the CGST Act 2017, TDS @2% (IGST 2% or CGST 1% and SGST 1%) will be deducted while making payment to the suppliers where total value of

orders/contracts/work orders exceeds Rs. 2.5 lakhs, in the event of order in Indian Rupees. Necessary TDS Certificate will be issued to the supplier after TDS deduction.

3.Payment Terms:

-Through Letter of Credit:- The L/C will be established for 90% value of purchase order will be paid against presentation of shipping documents.

-Through Wire Transfer:-10% payment will be paid through wire transfer after receipt and final acceptance of the item/s at IPR site and on submission of performance Bank Guarantee for 10% of the order value, valid throughout warranty period.

Encl: Refer attached sheet for detailed technical specificaiton.

Sd/-

Mr. D. Ramesh
Purchase Officer-II

Information to Vendors: We are working towards a single platform for our future requirement. Hence, please refer IPR website i.e, http://www.ipr.res.in/documents/tenderseng.html for our future requirement.

Specifications of the Schlieren Imaging system

1. **Parabolic Concave mirror (quantity-2nos.)**
   i. Diameter= 200 mm.
   ii. Focal length = 1200 mm.
   iii. Edge Thickness = 22 mm.
   iv. Coating = protected aluminium.
   v. Centration error = ≤6 arc of minutes.
   vi. Wavelength range = 450 nm to 20 µm
2. **Plane Mirror- (quantity-2 nos.)**
   i. Diameter = 125 mm.
   ii. Thickness = 15 mm.
   iii. Coating: Protected Aluminium.
   iv. Wavelength range = 450 nm to 20 µm
3. **Digital Camera with imaging lens (quantity-1no.)**
   i. Sensor Size = 0.5”CMOS color.
   ii. Active Imager size = 6.55 mm (length) X 4.92 mm (Height).
   iii. Maximum Resolution = 2048 x 1536 (3MP).
   iv. Frames per second = 10 FPS @ full resolution.
   v. Scan Type = Progressive scan.
   vi. Shutter type = Electronic rolling Shutter.
   vii. Spectral Range = 380-650 nm.
   viii. Exposure mode = Auto/manual.
   ix. White Balance = Manual/one-time/auto.
   x. Image format = RAW/BMP/JPG/PNG.
   xi. Interface = USB 2.0.
4. **Mirror Mount for 200 mm diameter (Quantity-2 nos.)**
   i. Material of construction = Black Anodized Aluminium Alloy.
   ii. On the plane of the mirror surface, coarse positioning of 360˚ in the two axis.
   iii. Resolution of 0.1˚.
   iv. Optical axis height from ground level = 1100-1200 mm.
   v. Mounting Holes = M6 slots.
5. **Mirror Mount for 125 mm diameter (Quantity-2 nos.)**
   vi. Material of construction = Black Anodized Aluminium Alloy.
   vii. On the plane of the mirror surface, coarse positioning of 360˚ in the two axis.
   viii. Resolution of 0.1˚.
   ix. Optical axis height from ground level = 1100-1200 mm.
   x. Mounting Holes = M6 slots.

6. **Knife edge**
    i. Positioning mount = 1 set.
    ii. XYZ stage with provision of fine adjustment in three axis with resolution of 10 microns.
7. **LED point source:**
    i. LED = 3W white.
    ii. Intensity can be adjustable.
    iii. Condenser optics for point source should be provided.
8. **Software:**
    i. It should be capable of image grabbing and analysis.
    ii. The system should have software compatible with Windows 7, windows 10.
9. The entire system should quoted with the surface table tops needed for proper functioning of the system.

Technical Compliance Sheet

Sr. No.	Specifications	Details	Vendor's Specifications
1.	**Parabolic Concave Mirror**	2nos.	
	Diameter	200 mm	
	Focal length	1200 mm	
	Edge Thickness	22 mm	
	Coating	protected aluminium	
	Centration error	= ≤6 arc of minutes.	
	Wavelength range	450 nm to 20 µm	
2.	**Plane Mirror**	2nos.	
	Diameter	125 mm	
	Thickness	15 mm	
	Coating	protected aluminium	
	Wavelength range	450 nm to 20 µm	
3.	**Digital Camera with imaging lens**	1 no.	
	Sensor Size	0.5"CMOS color.	
	Active Imager size	6.55 mm (length) X 4.92 mm (Height)	
	Maximum Resolution	2048 x 1536 (3MP)	
	Frames per second	10 FPS @ full resolution	
	Scan Type	Progressive scan	
	Shutter type	Electronic rolling Shutter	
	Spectral Range	380-650 nm	
	Exposure mode	Auto/manual	
	White Balance	Manual/one-time/auto.	
	Image format	RAW/BMP/JPG/PNG.	
	Interface	USB 2.0	
4.	**Mirror Mount for 200 mm diameter**	2 nos.	
	Material of construction.	Black Anodized Aluminium Alloy	
	On the plane of the mirror surface, coarse positioning of 360˚ in the two axis.		
	Resolution	0.1˚	
	Optical axis height from ground level	1100-1200 mm	

	Mounting Holes	M6 slots	
5.	**Mirror Mount for 125 mm diameter**	2 nos.	
	Material of construction.	Black Anodized Aluminium Alloy	
	On the plane of the mirror surface, coarse positioning of 360˚ in the two axis.		
	Resolution	0.1˚	
	Optical axis height from ground level	1100-1200 mm	
	Mounting Holes	M6 slots	
6.	**Knife edge**		
	Positioning mount	1 set.	
	XYZ stage with provision of fine adjustment in three axis with resolution of 10 microns		
7.	**LED point source**		
	LED	3W white	
	Intensity can be adjustable		
	Condenser optics for point source should be provided		
8.	**Software**		
	It should be capable of image grabbing and analysis.		
	The system should have software compatible with Windows 7, windows 10.		
9.	**The entire system should quoted with the surface table tops needed for proper functioning of the system.**		

Date : **Bidder's Sign and Stamp**