

	<p style="text-align: center;"><b>INDIAN INSTITUTE OF TECHNOLOGY MADRAS</b> <b>Chennai 600 036</b></p> <p style="text-align: center;">Telephone: (044) 2257 4426 E-mail: balajis@ee.iitm.ac.in</p>	
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Prof. Balaji Srinivasan  
Project Coordinator

Ref: ELE/2018/ OPMC  
Dated: 04.07.2018

Limited Tender No: ELE/2018/ OPMC

**Due Date: 18.07.2018, 2:00pm**

**Technical Bid opening meeting on Due Date: 18.07.2018, 4 pm**

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of **“Optical/Mechanical Components for Experimental Testbed”** conforming to the specifications given in **(Annexure-I)**:

**Instructions to the Bidder**

- (i) **Preparation of Bids:** - The Limited tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid.
- (ii) **Delivery of the tender:** -  
The tender shall be sent to the below-mentioned addresses either by post or by courier so as to reach the following address before the due date and time specified in our Schedule:  
**Prof. Balaji Srinivasan**  
**Department of Electrical Engineering,**  
**IIT Madras**  
**Chennai - 600 036.**

**In case of foreign vendors, the technical and the financial bids may be sent as separate files (with password protection) along with other required documents to [balajis@ee.iitm.ac.in](mailto:balajis@ee.iitm.ac.in) Both the bids must have the tender reference number mentioned clearly. Password should sent atleast 1 day before tender opening date.**

- (iii) **Opening of the tender:** - The offer/Bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements.

- (iv) **Prices:** - The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges to **Department of Electrical Engineering**.

The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of tax & duties should be clearly indicated.

The price should be quoted without custom duty and excise duty, since I.I.T. Madras is exempt from payment of excise duty, and the custom duty will be paid at concessional rate against duty exemption certificate.

In case of import supply, the price should be quoted on EX-WORKS and CIP basis indicating the mode of shipment.

- (v) **Agency Commission:** - Agency commission, if any, will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in the case of 'Nil' commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent. The foreign Principal should indicate about the percentage of payment and it should be included in the originally quoted basic price, if any.
- (vi) **Terms of Delivery:** - The item should be supplied to our Departments as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.
- (vii) **Technical Bid Opening:** The technical bid will be opened on **18.07.2018, 4 pm** at the Department of Electrical Engineering, IIT Madras and the financial bids of those tenders who are technically qualified will be opened at a later date under intimation to them.
- (viii) IIT Madras reserves the full right to accept / reject any tender at stage without assigning any reason.

Yours sincerely,

**Prof. Balaji Srinivasan**  
**Department of Electrical Engineering,**  
**IIT Madras**  
**Chennai - 600 036.**

## SCHEDULE

### Important Conditions of the tender

1. The due date for the submission of the tender is **18.07.2018, 2:00pm.**

The offers / bids should be submitted in two bids systems (i.e.) Technical bid and financial bid. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The Technical bid and financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Limited Tender for supply of “**Optical/Mechanical Components for Experimental Testbed**” should be written on the left side of the Outer bigger cover and sealed.

2. If an Indian agent is involved, the following documents must be enclosed:

Foreign principal’s proforma invoice indicating the commission payable to the Indian Agent and nature of after-sales service to be rendered by the Indian Agent.

- ✓ Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
- ✓ The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.

3. No prices should be included in the Technical bid.

4. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.

5. **Validity:** Validity of Quotation not less than 60 days from the due date of tender.

6. **Delivery Schedule:-** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.

7. **Risk Purchase Clause:-** In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.

8. **Payment:-** No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. In case of import supplies the payment may be made through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done).

9. **Advance Payment:-** In specific cases, an exception can be made upon recommendation of the PI.

10. **Warranty/Guarantee:** - The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately. (For more details please refer our Technical Specifications).

11. **Late offer:** - The offers received after the due date and time will not be considered. The Institute shall not be responsible for the late receipt of Tender on account of Postal, Courier or any other delay.
12. **Acceptance and Rejection:** - I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.
13. **Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.**
14. **Disputes and Jurisdiction:** -
  - a. **Settlement of Disputes:** Any dispute, controversy or claim arising out of or in connection with this PO including any question regarding its existence, validity, breach or termination, shall in the first instance be attempted to be resolved amicably by both the Parties. If attempts for such amicable resolution fails or no decision is reached within 30 days whichever is earlier, then such disputes shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, 1996. Unless the Parties agree on a sole arbitrator, within 30 days from the receipt of a written request by one Party from the other Party to so agree, the arbitral panel shall comprise of three arbitrators. In that event, the supplier will nominate one arbitrator and the Project Coordinator of IITM shall nominate one arbitrator. The Dean IC&SR will nominate the Presiding Arbitrator of the arbitral tribunal. The arbitration proceedings shall be carried out in English language. The cost of arbitration and fees of the arbitrator(s) shall be shared equally by the Parties. The seat of arbitration shall be at IC&SR IIT Madras, Chennai..
  - b. **The Applicable Law:** This Purchase Order shall be construed, interpreted and governed by the Laws of India, Court at Chennai shall have exclusive jurisdiction subject to the arbitration clause.
  - c. Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.
15. All Amendments, time extension, clarifications etc., will be uploaded on the website only and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date/ time shall be considered on account of delay in receipt of any document by mail.

**Acknowledgement:-** It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.

**SIGNATURE OF TENDERER  
ALONG WITH SEAL OF THE COMPANY WITH DATE**

## Optical/Mechanical Components for Experimental Testbed

Various optical and mechanical components are required to construct an experimental testbed, whose detailed specifications are given below. Please note that the components should be compatible, as specified below. Partial compliance of the list is not considered valid.

C.No.	Components	Specifications	Nos.
1.	Broadband Dielectric Mirror, Diameter 25.4 mm	Material: Zerodur, Wavelength: 750-1100 nm, Surface roughness (RMS: $\lambda/10$ ), Damage Threshold: upto 2kW/cm, Reflectance > 99% @ 1064nm	08
2.	Broadband Dielectric Mirror, Diameter 12.7 mm	Material: Zerodur, Wavelength: 750-1100 nm, Surface roughness (RMS: $\lambda/10$ ), Damage Threshold: upto 2kW/cm, Reflectance > 99% @ 1064nm	04
3.	Mirror Mount	Resolution per Adjuster: 5 $\mu$ rad Resolution: ~7.7 mrad/rev Mechanical Angular Range: $\pm 4^\circ$ (Compatible to C. No. 1)	06
		Resolution: ~8 mrad/rev Mechanical Angular Range: $\pm 4^\circ$ (Compatible to C. No. 1)	04
4.	Mirror Mount	Resolution per Adjuster: 5 $\mu$ rad Resolution: ~11 mrad/rev Mechanical Angular Range: $\pm 5^\circ$ (Compatible to C. No. 2)	04
		Resolution: ~13 mrad/rev Mechanical Angular Range: $\pm 4^\circ$ (Compatible to C. No. 2)	04
5.	Bi-convex Lens, Diameter 25.4 mm	ARC: 1050 - 1700 nm, Damage Threshold: upto 2kW/cm, Transmittance > 99.5% @ 1064nm, Focal length (f = 100,125,150,250,500,1000) mm	02 each
6.	Lens holder (Fixed)	(Compatible to C. No. 5)	15
7.	High Precision Lens Mount	XY Travel: $\pm 0.04''$ ( $\pm 1$ mm) (Compatible to C. No. 5)	04
8.	Lens Wrench	(Compatible to C. No. 6)	02
9.	Lens Mount Alignment Plate (Fixed)	1 mm Through Hole (Compatible to C. No. 6)	04
10.	Zero-Order $\lambda/2$ Wave plate,	AR Coating: 1064 nm, Retardance Accuracy: $\lambda/300$ Diameter 25.4 mm,	02
11.	Zero-Order $\lambda/4$ Wave plate	AR Coating: 1064 nm, Retardance Accuracy: $\lambda/300$ , Diameter 25.4 mm	02
12.	Indexed Rotation Wave Plate mount	Continuous rotation: $360^\circ$ Stepped rotation: Increments of $15^\circ$ (Compatible to C. No. 10,11,20,21)	06
13.	Wedge Plate Beam Splitter	Wedge Angle: $5^\circ \pm 3$ arcmin Size: 50.8 mm x 25.4 mm	02
14.	Wedge Plate BS holder	Tip/Tilt Adjustment Range of $\pm 4^\circ$ (Compatible to C. No. 13)	02

15.	Polarize Cubic Beam Splitter	Wavelength Laser Line -1064 nm, 50:50 Surface Flatness $<\lambda/10$ at 633 nm Damage Threshold: $> 2\text{kW}$ Size: 25.4 mm x 25.4 mm	02
16.	Polarize Cubic Beam Splitter	Wavelength Broadband-900 -1300 nm, 50:50 Surface Flatness $<\lambda/10$ at 633 nm Damage Threshold: $> 2\text{kW}$ Size: 25.4 mm x 25.4 mm	02
17.	Beam Splitter Holder	Platform Depth: 25.4 mm Adjustment per Revolution: 8mrad (Compatible to C. No. 14 &15)	05
18.	Beam Splitter Clamping	(Compatible to C. No. 17)	05
19.	Beam Splitter Clamping Extension Rods	(Compatible to C. No. 17)	05
20.	Linear Polarizer	Wavelength: 550 – 1500 nm, Acceptance angle: $\pm 20^\circ$ , Diameter 25.4 mm	01
21.	Linear Polarizer	Wavelength: 650 – 2000 nm, Acceptance angle: $\pm 20^\circ$ , Diameter: 25.4 mm	01
22.	Band-pass Filter	CWL: 1064 nm, FWHM: 8 nm, Diameter: 25.4 mm	04
23.	NIR Absorptive ND Filters	Wavelength Range: 800 - 2600 nm, Damage Threshold: $>100\text{W}$ , Diameter: 25.4 mm, Power: 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 1.0, 1.3, 2.0, 3.0, 4.0, 5.0, 6.0 OD	01 each
24.	Neutral Density Filters Mount	(Compatible to C. No. 23)	01
25.	Neutral Density Filters Box	Capacity: 10 (Compatible to C. No. 24)	01
26.	Mounted Zero-Aperture Iris	Diameter: 25.4 mm, Minimum Aperture: Zero	06
27.	Mounted Zero-Aperture Iris	Diameter: 12mm, Minimum Aperture: Zero	04
28.	Post Mounted Iris	Diameter: 25.4 mm, Material: Stainless-steel, Minimum Aperture: Zero	04
29.	Post Mounted Iris	Diameter: 12 mm, Material: Stainless-steel, Minimum Aperture: Zero	04
30.	Laser IR Detector Card	Wavelength Range: 790 - 840 nm, 870-1070 nm, 1500 - 1590 nm, Damage Threshold: $>2\text{kW}$	02
31.	Laser VIS/IR Detector Card	Wavelength Range: 400 - 640 nm, 800-1700 nm, Damage Threshold: $>2\text{kW}$	04
32.	Visible and IR Alignment Disk	Wavelength Range: 400 – 640 nm, 800-1700 nm, Diameter 25.4 mm, Hole in Disk Center:1.5 mm	04
33.	Magnetic Measuring Tape	Size: 1000 mm	02
34.	Magnetic Table Cover	Size: 30.5 cm x 45.7 cm x 0.1 cm	02
35.	Magnetic Beam Height Measurement Tool	Size: 155 mm	03
36.	Magnetic Beam Height Measurement Tool	Size: 305 mm	03
37.	90° Mounting Bracket for Magnetic Beam Height Rulers	Built-In Spirit Level Simplifies Leveling (Compatible to C. No. 35 & 36)	04
38.	Magnetic Laser Safety Screen	Size: 300 mm x 75 mm	04
39.	Aluminum Protective Screen	Size: 305mm x 305mm	06
40.	Screen Straight Joiner Plate	(Compatible to C. No. 39)	05
41.	Screen Corner Joiner Plate	(Compatible to C. No. 39)	04
42.	Optical Post	Length (mm): 20, 30, 40, 50, 75, 100 Diameter: 12.7 mm, Material: Stainless Steel	10 each
43.	Magnetic Post Holders	Length (mm): 30, 40, 50, 75, Diameter: 12.7 mm (Compatible to C. No. 42)	05 each
44.	Optical Post Collar	Diameter: 12.7 mm (Compatible to C. No. 42)	01
45.	M4 Setscrew and Hardware Kit	Setscrew Length: 4, 5, 6, 10, 12,16, 20, 25 mm and Nos. 495, 330, 330, 185,165, 100, 55,55, respectively.	01

46.	M6 Cap Screw and Hardware Kit	Capscrew Length: 10,12,16,20,25,30,35,45 mm and Nos. 60,55,87,75,62,51,50,43, respectively. Setscrew Length: 12,20 mm Nos, 150,65. Nut: 120, Washer: 1/4" 220	01
47.	Stackable Cabinet	No. of Drawers: 20 Size of 1-Drawer: 268.2 mm×83.8 mm×55.4 mm	01
48.	Linear Translation Stages	Travel: 25 mm, Resolution: 500 μm Per Revolution, XY Stacked Orthogonality: <25 μrad, Angular Deviation: <150 μrad	08
49.	XZ Stage Assembly Kit	(Compatible to C. No. 48)	06
50.	Stage Base Plate	(Compatible to C. No. 49)	08