**INDIAN INSTITUTE OF TECHNOLOGY MADRAS**
**Chennai 600 036**

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Prof. Balaji Srinivasan
Project Coordinator

Ref: ELE/BALA/2019/OCFS
Dated: 11.10.2019

Limited Tender No: ELE/BALA/2019/OCFS

**Due Date: 25.10.2019, 4:00pm**

**Technical Bid opening meeting on: 25.10.2019, 4:30pm**

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of **"Optical Components for High Power Laser Experiment"** conforming to the specifications given in **(Annexure-I):**

**Instructions to the Bidder**

I. **Preparation of Bids:** - The Limited tenders should be submitted under one bid system (i.e.) Technical-cum-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**
**Dept. of Electrical Engg, IIT Madras**
**Chennai - 600 036.**

III. **Opening of the tender:** - The offer/Bids will be opened by a committee duly constituted for this purpose.

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, IIT Madras.**

The offer/bid should be exclusive of taxes and duties. The percentage of tax & duties should be clearly indicated separately. IIT Madras is eligible for concessional GST and relevant certificate will be issued.

In case of import supply, the price should be quoted without custom duty. IIT Madras is exempted from levy of IGST on Imports and eligible for concessional custom duty (not

exceeding 5%) and 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 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-cum-financial bid opening:** The bids will be opened on **25.10.2019, 4:30pm** at the Department of Electrical Engineering, IIT Madras.

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 **25.10.2019, 4:00pm.**
   The offers / bids should be submitted in one bid systems (i.e.) Technical-cum-financial bid. Also, it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The bid should be put in cover and sealed. The Limited Tender for supply of "**Optical Components for High Power Laser Experiment"** should be written on the left side of the cover.

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.

3. Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical-cum-financial 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**: -

   I. **Advance Payment: -** No advance payment is generally admissible. In specific cases upon the recommendation of Principal Investigator (PI) the advance payment will be made through wire transfer.

9. **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).

10. **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.

11. **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.

12. **Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.**

13. **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.

14. 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 Components for High Power Laser Experiment

## Specifications

Various optical components are required to perform the high power fiber laser propagation experiment in free space. All the optical components must have a very high laser damage threshold upto 1 $MW/cm^2$ at 1064 nm continuous wave laser. Detailed specifications of each component are given below.

| S. No. | Components | Dia. (mm) | Other Specification | LDT | Quantity |
|---|---|---|---|---|---|
| 1 | Mirrors | 50.8 | Shape: Flat,<br>Mirror Thickness: 6.35<br>AOI: 0<br>Coating Type:<br>Laser Line Dielectric<br>Surface Figure: λ/10 | $1MW/cm^2$ | 05 |
| | | 25.4 | Shape: Flat,<br>Mirror Thickness: 6.35<br>AOI: 0<br>Coating Type:<br>Laser Line Dielectric<br>Surface Figure: λ/10 | $1MW/cm^2$ | 10 |
| | | 12.7 | Shape: Flat,<br>Mirror Thickness: 6.35<br>AOI: 0<br>Coating Type:<br>Laser Line Dielectric<br>Surface Figure: λ/10 | $1\ MW/cm^2$ | 06 |
| 2 | Polarizing Cube Beam Splitter | 25.4 | Shape: Cube<br>Coating Type:<br>Laser Line Dielectric<br>Extinction Ration: 750:1<br>Surface Figure: λ/10 | $1MW/cm^2$ | 06 |
| 3 | Non Polarizing Cube Splitter | 25.4 | Shape: Cube<br>Coating Type:<br>Laser Line Dielectric<br>Surface Figure: λ/10 | $>2kW/cm^2$ | 04 |
| 4 | Biconvex Lenses | 50.8 | Focal length (mm)=50<br>Surface Figure: λ/10<br>Coating: High Energy ARC | $1MW/cm^2$ | 01 |
| | | | Focal length (mm)=75<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 01 |
| | | | Focal length (mm)=200<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 01 |
| | | 25.4 | Focal length (mm)=50<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 02 |
| | | | Focal length (mm)=75<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 02 |
| | | | Focal length (mm)=100<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 02 |
| | | | Focal length (mm)=200<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 01 |

| | | | | | |
|---|---|---|---|---|---|
| | | | Focal length (mm)=300<br>Surface Figure: λ/10<br>Coating: High Energy ARC | | 01 |
| 5 | Wave plate: λ/2 | 25.4 | Transmitted Wavefront Error: λ/10<br>ARC: R ≤ 0.2% per surface | 1MW/cm$^2$ | 10 |
| 6 | Wave plate: λ/4 | 25.4 | Transmitted Wavefront Error: λ/10<br>ARC: R ≤ 0.2% per surface | 1MW/cm$^2$ | 04 |
| 7 | Plate Beam Splitter | 25.4 | R-2%, T-98%<br>AOI: 45<br>Surface Figure: λ/10 | 1MW/cm$^2$ | 04 |
| | | 25.4 | R-50%, T-50%<br>AOI: 45<br>Surface Figure: λ/10 | | 04 |
| 8 | Polarizer | 25.4 | Surface Figure: λ/8<br>Extinction Ratio: 500:1 | 1MW/cm$^2$ | 02 |
| 9 | Laser Line filter | 25.4 | Center Wavelength: 1064nm<br>FWHM: 4nm +/- 0.6nm | >2kW/cm$^2$ | 05 |
| 10 | Neutral Density Filter | 25.4 | OD= 1.0, 2.0, 3.0, 4.0, 5.0, 6.0 | >5kW/cm$^2$ | 02 each |

1. Wavefront error on all the optics should be better than or equal to lambda/10
2. Vendor should supply laser damage threshold report for all the optics