

## **Request For Quote for “Spatial Light Modulators (Qty. 2)” from domestic (India-based) manufacturers**

Ref: PH/SBM/530/2022-23

Date: 23/06/2022

This is a Request for Quote (RFQ) from domestic (India-based) manufacturers for the procurement of phase-only “**spatial light modulators**” (referred to as equipment or system in the RFQ) that will be utilized for photonic research at IISc Bangalore. The required technical details, including terms and conditions, are provided below. The last date of reaching the quotation to us is mentioned below.

With respect to this tender, the rules laid out by the Government of India in order No. P45021/2/2017-PP (BE-II) issued by the Public Procurement Section, Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, dated 04th June 2020, will be followed. Per this order, the government has defined a ‘Class-I local supplier’ as “a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%”. A ‘Class-II local supplier’ is “a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%”. Only ‘Class-I’ and ‘Class-II’ local suppliers are eligible to participate in this open domestic tender. Any ‘Non-local supplier’, i.e., “a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%” is ineligible to participate in this tender.

### **Specifications:**

1. Compact tabletop spatial light modulators (SLMs) with LOCS (Liquid crystal on silicon) -based reflective display are required. Each display unit should come with its driver.
2. The system/SLM should ideally be able to withstand 1 picosecond optical pulses with 5 micro-J pulse energy at 5 kHz repetition rate. Please provide details, e.g., heating effects, phase fluctuation, damage threshold, etc.
3. Quantity: Two sets of identical SLMs
4. Modulation: Phase only
5. Phase shift near 1064 nm wavelength should be  $\geq 2.5 \times \pi$  rad
6. Wavelength range: at least in the range of 1000 nm to 1080 nm
7. Active area: typically, 15 mm x 9 mm
8. Dielectric mirror coating is required with  $\geq 92\%$  reflectivity
9. Resolution: 1920 x 1080-pixel, HD resolution

10. Pixel pitch: approximately 8 microns
11. Fill factor must be >90%
12. Cooling: quote separately for a heat sink
13. Operating voltage, frequency: 220 VAC, 50 Hz
14. The system should be plug & play, maintenance-free.
15. Integration: The vendor/company should provide a complete factory set integrated system. Testing and documentation should be done using the complete system, assembled, and integrated in the factory
16. All accessories such as mounts, cables (e.g., HDMI, USB), power supply, power cable, etc. required for the independent operation of the device should be included.
- 17. Include pictures of the exact system being offered**
18. Warranty: 1 year from the date of installation. Quote for extending the warranty period for an additional one (i.e., total of two) years.

#### **Terms and conditions:**

1. The Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
2. The bid should be submitted in a two-cover system, i.e., technical bid and commercial bid, separately in sealed covers. The technical bid should contain all commercial terms and conditions, **except the price.**
3. The technical bid must contain a point-by-point technical compliance document. The technical proposal should contain a compliance table that should describe your compliance in a "yes" or "no" response against each specification. If "no" the second column should mention the extent of the deviation. The third column should state the reason for the deviation, if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirement table below. **Tender documents without technical compliance documents will not be considered.**
4. In the commercial bid, the price should be inclusive of all discounts.
5. The vendor/company should have a track record of having previously supplied similar equipment in well-known national/international institutes/universities (please furnish details).
6. The vendors quoting should ideally be registered with IISc, and the quote should ideally carry the vendor registration number in the bid.

7. The covering letter in the bid should clearly mention whether the vendor is a 'Class I' local supplier or a 'Class II' local supplier, failing which the vendor will be automatically disqualified. The vendor should indicate the percentage of the local content and provide self-certification that the items offered meet the minimum local content requirement. They should also give details of the location(s) at which the local value addition was made.
8. Lead time should be clearly mentioned in the technical and commercial bids.
9. The offer shall be valid at least 90 Days from the date of opening of the commercial bid.
10. The vendor/company should have existence for a minimum of 3 years. (Enclose Company Registration Certificate).
11. The vendor/company must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere.
12. The quotations should be on FOR-IISc Bangalore basis in INR only
13. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
14. Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:
  - a. To accept OR reject lowest tender or any other tender or all the tenders.
  - b. To accept any tender in full or in part.
  - c. To reject the tender, offer not confirming to the tender terms.
15. The tender documents can be sent at the following address by post or in-person, and the document should reach us on/before **15 July 2022**.

The Chairman  
Department of Physics  
Indian Institute of Science,  
Bangalore 560012, Karnataka, India  
Attention: Seababrata Mukherjee