

Global Tender notification for “a compact supercontinuum laser source and a computer-controlled tunable filter”

Ref: PH/SBM/521/2021-22;

Date: 30/11/2022

This is a notice inviting global tenders for the procurement of “a compact supercontinuum laser source and a computer-controlled tunable filter” (referred to as equipment or system in this document) that will be utilized for optics experiments. The required technical details including terms and conditions are provided below. The last date of reaching the quotation to us is mentioned below.

(A) Specifications of supercontinuum laser:

1. Photonic Crystal Fibre based supercontinuum laser source covering visible to infrared wavelength range in one module/unit is required.
2. Wavelength range: ≤ 450 nm to ≥ 2300 nm
3. Total average power must be in the range of 100 mW to 140 mW. Total power in the wavelength range 450-860 nm should be ≥ 20 mW
4. Output pulse width must be in the range of 1 ns to 2 ns
5. Collimated output beam is required with beam diameter of ≥ 2 mm near 1064 nm
6. Output should be single mode, close to Gaussian (cross-sectional) intensity profile
7. Beam quality: $M^2 < 1.1$
8. Power stability: At least $\pm 1\%$. The option of software-controlled output power lock is required with $\pm 0.5\%$ fluctuation over 24 hours. Measured data must be provided as a part of the technical specifications.
9. Repetition rate should be variable. Minimum repetition rate: 1 Hz. Maximum repetition rate: approximately 18 kHz (must be below 100 kHz).

(B) Specifications of tunable filter:

10. Computer-controlled, portable filter for selecting specific narrow wavelengths from the supercontinuum laser in one module/unit is required. The supercontinuum laser and the filter unit should be integrated. All necessary interfacing between the laser and the filter must be included.
11. Acousto-Optic Tunable Filter (AOTF) is preferred.
12. Wavelength tunability range must be in the range of **450 nm to 1100 nm**.
13. In case multiple filters are used to cover the above wavelength range, the filters should be integrated and assembled in one unit.
14. Output mode: Free-space collimated. Arrangement for fibre-coupling is preferred (quote separately).

15. Polarization: Linear, horizontal with respect to base
16. Filter bandwidth: Filter bandwidth (FWHM) should be 2.5 nm to 8 nm (or better) in the visible and 2.5 nm to 5 nm (or better) in the NIR wavelength range. Provide measured bandwidth as a function of wavelength along with the technical specification.
17. Multiple wavelength channels should be accessible and controllable through the software. At least six different tunable wavelength channels are required.
18. Integrated mechanical shutter is required.
19. Wavelength accuracy: The deviation from the target wavelength value must be less than 0.2 nm near 500 nm and less than 1 nm in the wavelength range of 450 to 650 nm. Measured data must be provided as a part of the technical specifications.

(C) Specifications of the system (laser + filter):

20. Operating voltage, frequency: 220 VAC, 50 Hz
21. The system should be plug & play, maintenance-free, software-controlled, and suitable for 24/7 operation.
22. Reliability: The system must be capable of at least 10,000 hours of service-free operation; details must be provided along with the technical specifications.
23. Operation temperature: 20 deg C to 30 deg C
24. Cooling: Integrated air-cooling is required
25. All accessories such as RF driver, necessary software, connectors, adapters, cables etc. required for the independent operation of the device should be included.
26. Installation should be performed on site
27. The vendor/company and/or their associate (agent) in India should provide after sales service, full support, and repair if required.
28. Warranty: 2 years [onsite repair is preferred] from the date of installation is required. Quote separately for extending the warranty period for an additional one (i.e., total of three) years.

Terms and conditions:

1. 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**.
2. 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.**

3. In the commercial bid, the price should be inclusive of all discounts.
4. Track record: The manufacturer must have previously supplied at least **twenty similar equipment** in India. Provide references and details of previously supplied equipment in India.
5. The vendors quoting should ideally be registered with IISc, and the quote should ideally carry the vendor registration number in the bid.
6. Lead time should be clearly mentioned in the technical and commercial bids.
7. The offer shall be valid at least 90 Days from the date of opening of the commercial bid.
8. The vendor/company should have existence for a minimum of 3 years. (Enclose Company Registration Certificate).
9. 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.
10. The quotations should be on C.I.P. Bangalore basis (by Air Freight only). Please provide itemized cost of the system and required accessories. The quotation should mention the terms of delivery, delivery schedule, estimated delivery date, and payment terms.
11. 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.
12. 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.
13. The tender documents can be sent at the following address by post or in-person, and the document should reach us on/before **22 December 2022**.

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