

**Notice Inviting Open Tender for Procurement of Visible Near-Infrared,
Shortwave Infrared High Resolution Spectroradiometer (350nm – 2500nm) at
the Indian Institute of Science, Bangalore**

(Tender from Domestic Vendor and Suppliers)

Bids are invited from domestic OEM / authorized distributor of domestic OEM

(Last date of Submission: 29th March 2021)

Date: 5th March 2021

Dear Sir/Madam:

Please send your tender documents valid for 180 days from the actual date of opening the technical bid, for the supply of equipment described below. Your documents/quotation should clearly indicate the terms and conditions of the quotations, delivery schedule, entry tax, payment terms, warranty coverage etc. The tender should be submitted in two separate sealed envelopes – one containing the “Technical bid” and other containing the “Commercial bid”, both of which should be duly signed and must reach the undersigned on or before 17:00 hours 29th March 2021.

The Chairman
Civil Engineering Department
Indian Institute of Science,
Bangalore 560012,
Karnataka, India.
Attn: Debsunder Dutta

Section 2 - Eligibility Criteria:

With respect to this tender, the rules laid out by the Government of India in order No. P-45021/2/2017-PP (BE-II) issued by the Public Procurement Section, Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, dated 16th September 2020, will be followed. Per this order, only Class-I and Class-II local suppliers as defined below are eligible to participate in this open domestic tender. Non-local suppliers are ineligible to participate in this tender.

Relevant definitions as per Government of India order:

- Class-I local supplier - a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%
- Class-II local supplier - a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%.
- Non-local supplier - a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%.
- Local content – the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.

Only Local Suppliers are eligible to participate in the bid. The bidders must go through the Government of India order stated above and follow all the rules and regulations therein. The covering letter Should clearly indicate whether the vendor is a Class I or class II local supplier failing which the vendor will automatically be disqualified.

SECTION 3 – Technical Specifications

High Resolution Spectroradiometer covering the 350-2500nm Spectral Range for field and laboratory use.

A. Main Instrument Specifications (the specifications stated are minimum required, a better specification is desirable).

Sl No	Description	Specification (Minimum)
1	Spectral Range	350nm-2500nm
2	Spectral Resolution	3nm at 700nm, 6nm at 1400nm, 6nm at 2100nm
3	Spectral Sampling	1.4nm at 350-1000 nm 1.1nm at 1001-2500nm

4	Scanning time	100 milliseconds
5	Stray Light Specification	VNIR 0.02%, SWIR 0.01%
6	Wavelength Reproducibility	0.1 nm
7	Wavelength Accuracy	0.5 nm
8	Channels	2151
9	Detectors	VNIR detector (350-1000 nm): 512 element silicon array SWIR 1 detector (1001-1800 nm): Graded Index InGaAs Photodiode, Two Stage TE Cooled. SWIR 2 detector (1801-2500 nm): Graded Index InGaAs Photodiode, Two Stage TE Cooled.
10	Input	1.5 m ruggedized optical fiber cable (25 deg FOV) with optional availability of narrower field of view optics.
11	Noise Equivalent Radiance (NEdL)	VNIR 1.0×10^{-9} W/cm ² /nm/sr @700 nm SWIR-1 8.0×10^{-9} W/cm ² /nm/sr @ 1400 nm SWIR-2 8.0×10^{-9} W/cm ² /nm/sr @ 2100 nm
12	Weight	Less than 6 Kgs.

Standard Items accompanying the Main Instrument for both field and laboratory use:

1. Pistol grip for holding the 1.5 meter permanent fiberoptic cable.
2. Battery to instrument power cable
3. Fiber Checker for checking the Fiberoptic cable
4. Power cable to power the instrument from vehicle power port.
5. 1.5 meter RJ45 CAT 5e UTP Crossover Cable
6. Remote trigger for remote data storage.
7. 45 Watt 12VDC 9000 mAH NiMH high current rechargeable battery pack for about 4 hour output.
8. External charging/power system 90-240VAC 50/60Hz (automatic selection) input and 4A DC output, over current protection.
9. Transport Case: durable, airtight, wheeled, transport/shipping case with fold down handle.
10. Field Pack: lightweight ergonomic backpack, waist belt with battery pouches, rain protector, controller computer compartment, sample storage compartment, and easy snap on clear PETG controller computer tray.

B. Instrument Controller

Field and Laboratory Instrument controller (laptop) loaded with data collection/calibration/instrument operating software and configured specifically to the corresponding spectrometer calibration files.

C. Accessory for Bare (25 deg FOV) Reflectance Measurement

Spectralon, 5X5 inch, Calibrated, 99% Reflective Diffuse white reference panel. Include certificate of standard deviation and reflectance factors to 3 decimal places for 50nm intervals.

D. Accessory for Bare (25 deg FOV) Radiance Measurement

RadCal 25 Degree Full range Bare Fiber Optic. Factory installed NIST traceable calibration that is required for radiance ($W/m^2/steradian/nm$) calculation.

E. Software for data acquisition and preliminary post processing

Data Acquisition Software

Windows compatible user interface software for the instrument for data collection, averaging, storage and display of DN, reflectance, radiance or irradiance spectra in 'real-time'.

Additional software for preliminary data processing and export data to ASCII format.

F. Warranty

The complete system is to be under manufacturer's warranty minimum for a period of 1-year from the date of installation including any accessories, parts and controllers.

G. Optional Extended Warranty

The complete system is to be under extended manufacturer's warranty for an additional period of 2 - years from the date of expiry of manufacturer's warranty including any accessories, parts and controllers.

H. Optional Accessories for Contact Measurements

Plant Probe Kit which includes Lamp MR6 4.25V 4.5 Watt Halogen, Contact Probe Plant, Leaf Clip, White Reference Cap.

I. Optional Annual Maintenance Contract

An annual maintenance contract for a period of 5 years from the date of installation.

Section 4–Terms and Conditions:

1. The tender document should be in English and be submitted in two bid system; i.e., Technical bid, and Commercial bid in two sealed envelopes with commercial or technical bid clearly indicated on the envelope. These two sealed envelopes should be placed within a larger envelope and “High Resolution VSWIR Spectroradiometer Bid – Debsunder Dutta, Civil Engineering. Department” should be written on the outer envelope.
2. The technical bid must include all details of technical specifications of the instrument along with commercial terms and conditions masking only the price component. Bill of materials, brochures, technical datasheets, and any other document may be enclosed to help the evaluation of the technical bid. Please also include warranty terms and any other information on upgradation terms/extra accessories in the technical bid.
3. The technical bid must clearly state the specifications of the main instrument (A) along with the accompanying standard items and all other details including the warranty terms (B-I) as specified in section 3 of this document.
4. The commercial bid must include the base price of the instrument delivered in place and all components including controller accessories plus any additional GST component.
5. The commercial bid must indicate detailed component-wise and itemized price breakup and must include optional items/accessories.
6. Bidder should have well established own establishment. Enclose Company Registration Certificate, PAN, 3 years of audited balance sheets and turnover.
7. The covering letter in the technical bid should clearly mention whether the vendor is a Class I or Class II local supplier, failing which the vendor will be automatically disqualified.
8. In the technical bid include the complete details all components of the main instrument and the accessories as to whether they are sourced locally or foreign made/imported along with the manufacturer and sourcing details.
9. The ‘Class-I local supplier/Class-II local supplier’ is required to indicate the percentage of local-content and provide self-certification that the item offered meets the local content requirement for ‘Class-I local supplier/Class-II local supplier’ as the case may be. They shall also give details of the location(s) at which the local value addition is made.
10. The vendor should provide detailed cost breakup for the Indian and foreign content of the bid in the commercial bid proving their status as a Class I or Class II local supplier. Vendors who do not provide such justification in the commercial bid will be automatically disqualified.
11. In case if there are any imported/foreign made components, the commercial bid must indicate procurement price from the manufacturer and any import duties incurred. IISc will not be responsible for any import duties.
12. The vendor should have a good track record of having previously supplied similar equipment in India or elsewhere in the world (Please furnish complete details including names and contact addresses). Reference letters may be sought by the committee to arrive at the decision.
13. The vendor should have qualified technical service personnel for the instrument based in Bengaluru.
14. Bidder should have executed at least three order of similar instrument in India in the last 2 years. (Please provide copy of purchase orders and details).

15. The bidder should provide a list of national and international publication resulting from the data of the instrument.
16. The Bidder should not be currently blacklisted by any institution, bank in India or abroad (Please provide self-declaration).
17. No advance payment will be made, the payment will be made after delivery and installation of equipment.
18. Agency commission (not encouraged) if any should be clearly mentioned and detailed in the commercial bid.
19. The lead time for the delivery of the equipment should not be more than two months from the date of receipt of purchase order and must be mentioned in the technical bid.
20. If the equipment or any parts/accessories are found to be defective, they have to be replaced or rectified at the cost of the supplier within 30 days from the date of receipt of written communication from us. If there is any delay in replacement or rectification, the warranty period needs to be extended by a year and/or face a penalty equal to the valuation of the equipment.
21. The technical bid will be opened first and evaluated.
22. Bidders meeting the required criteria as stated in Section 2 and 3 of this document as well as the terms and conditions shall only be considered for Commercial Bid opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
23. Following the opening of technical bid a presentation may be sought from the bidder.
24. During the warranty period, the bidder shall be fully responsible for the manufacturer's warranty in respect of proper design, quality and workmanship of all the systems supplied. If there is any delay in replacement or rectification, the warranty period needs to be extended by a year and/or face a penalty equal to the valuation of the equipment.
25. During the warranty period, the bidder shall attend to all the hardware problems on site and shall replace the defective parts at no extra cost to the purchaser.
26. The Engineers of the parent manufacturer or bidding firm must install, demonstrate and provide the training on Spectroradiometer for two days at IISc, Bangalore without additional cost.
27. The bids should be valid for at least 90 days from the last date of submission of the quotation.
28. The price should be quoted in INR only. The cost should be inclusive of delivery till the IISc campus. Price offer must be on FOR-IISc Bangalore basis. Please note that IISc being a DSIR recognized research institution under GST notification no. 47/2017 and the items under this procurement is required for research purposes only, is eligible for reduced GST (5%). Please also include any available educational discounts in the commercial bid. IISc may issue the GST Exemption Certificate upon a formal request from the vendor alongwith a copy of invoice.
29. The decision of the purchase committee will be final.
30. IISc, Bangalore reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time period to award of construct without thereby incurring any liability of the affected bidder or bidders.
31. Tender documents that do not satisfy the "Terms and Conditions" listed herein will be disqualified.

32. The tender documents should be sent to the following address no later than **29/03/2021 by 17:00 hrs.**

The Chairman
Civil Engineering Department
Indian Institute of Science,
Bangalore 560012
Karnataka, India.
Attn: Debsunder Dutta