

**Supply and Installation of Solar Material Testing Facility: UV-Visible-NIR Optical Measurement**

**NOTICE INVITING DOMESTIC TENDER**

Department of Materials Engineering  
Indian Institute of Science  
Bangalore-560012  
India

Date: 16/12/2025

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## 1. Bid Schedule

1.	Tender Number	MT/SRR/2025/OS-1
2.	Tender Date	16/12/2025
3.	Item Description	Supply and Installation of Solar Material Testing Facility: UV-Visible-NIR Optical Measurement
4.	Tender type	Two bid system i      Technical Bid (Part A) ii      Commercial Bid (Part B)
5.	Place of tender submission	Office of the Chair Department of Materials Engineering Indian Institute of Science Bangalore-560012 India
6.	Last Date & Time for submission of tender	06/01/2026
7.	For further clarification	Dr. Sachin R. Rondiya Assistant Professor Department of Materials Engineering Indian Institute of Science Bangalore-560012 India

## **2. Eligibility Criteria**

Prequalification criteria:

1. The bidder must have supplied similar systems to at least 10 educational institutes/universities and/or research organizations in India along with contact details.
2. The Bidder should belong to either class 1 or class 2 supplier distinguished by their “local content” as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.
  - a. Class 1 supplier: Goods and services should have local content of equal to or more than 50%.
  - b. Class 2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.) (please refer to the attached public procurement order I annex)
  - c. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
3. Purchase preference as defined by the recent edits to GFR (within the “margin of purchase preference”) will be given to Class-1 supplier.
4. MSME can seek exemption to some qualification criteria. IISc follows GFR2017 for such details
5. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.
6. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.
7. Original Invoice, Original Warranty Certificate, Original Test Reports should be produced for all imported items from OEM (Original Equipment Manufacturer) at the time of supply of the equipment.
8. System Catalogue should be produced with the Technical Bid.
9. Manufacturers should have ISO or equivalent international standard certificate. Please attach the required certificate with the bid.
10. Details of an experienced service engineer including contact details should be provided in tender document.
12. Bidder shall have to submit audited accounts (Balance sheet profit and loss account) of last three financial years. Audited statements must be signed and stamped by a qualified chartered accountant.
13. Bidder must submit Income Tax return for last three financial assessment years.
14. Bidder must submit up to date sales tax or GST clearance certificate.

15. CE Certification must be provided for the proposed system. The CE certificate should be provided with the Unit.

### **3. Terms and Conditions**

#### **A) Submission of Tender:**

1. All documentations in the tender should be in English.

2. Tender should be submitted in two envelopes (two bid system).

a. Technical Bid (Part-A) – Technical bid consisting of all technical details and check list for conformance to technical specifications. The technical proposal should contain a technical compliance table with 5 columns.

I. The first column must list the technical requirements, in the order that they are given in the technical requirement below.

II. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible with technical details in annexure.

III. The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent.

IV. The fourth column should state the reasons/explanations/context for deviations, if any.

V. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details.

b. Commercial Bid (Part-B) – Indicating item wise price for the items mentioned in the technical bid, as per the format of quotation provided in tender, and other commercial terms and conditions.

3. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description& Due Date.

4. The SEALED COVER superscripting tender number / due date & should reach Chairperson Office, Department of Materials Engineering, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case due date happens to be a holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.

All queries are to be addressed to the person identified in “Section 1 – Bid Schedule” of the tender notice.

5. The price must be quoted in INR (Indian Rupee). Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor. The quotations should be on FOR-IISc Bangalore basis in INR only.

6. If price is not quoted in Commercial Bid as per the format provided in tender document the bid is liable to be rejected.

7. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.

8. Incomplete bids will be summarily rejected.

**B) Cancellation of Tender:**

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.

**C) Validity of the Offer:**

The offer shall be valid at least 90 Days from the date of opening of the commercial bid.

**D) Evaluation of Offer:**

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.
4. The award of contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
  - a. Non-submission of complete offers.
  - b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise)
  - c. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall consider that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained. Further if the BIDDER is silent or does not give detail justification of their claim regarding those mentioned in technical specifications, IISc Bangalore reserves the full right to reject the tender due to non-compliance without any further discussion.

7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

8. Lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, preprocessing and post processing, optional items, recommended spares, warranty.

**E) Pre-requisites:**

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

**F) Warranty:**

The complete system is to be under warranty period of minimum 1 year from the date of functional installation. If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

**G) Purchase Order:**

1. The order will be placed on the bidder whose bid is accepted by IISc based on the terms & conditions mentioned in the tender document.

2. The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.

3. If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

**I) Delivery, Installation and Training:**

The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order. The system should be delivered, installed and made functional within 180 days from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over of entire system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed.

The bidder should also arrange for technical training to the local facility technologists and users.

**J) Payment Terms:**

100% payments will be released after completion delivery and satisfactory installation subject to TDS as per rules. AMC cost (if ordered), after completion of warranty period) will be released on half-yearly basis at the end of each six months subject to satisfactory services. Price basis must be on FOR-IISc Bangalore basis only. As per GFR, no advance payment can be made to domestic vendors unless an equal amount of bank guarantee is provided.

**K) Statutory Variation:**

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed onto IISc, Bangalore.

**L) Disputes and Jurisdiction:**

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 Bangalore, India.

**M) General:**

1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.
2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.
3. The bidder may visit the installation site before submission of tender, with prior intimation.
4. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc, Bangalore.

#### 4. Technical Specification

<b>Technical Specifications for Solar Material Testing Facility: UV-Visible-NIR Optical Measurement</b>	
<b>Configuration Design: Solar Material Testing Facility: UV-Visible-NIR Optical Measurement</b>	
<b>General Description</b>	
<b>Essential</b>	<p>1. PC controlled Solar Material Testing Facility: UV-Visible-NIR Optical Measurement should work in transmission, Reflection and Absorption mode with high accuracy and precision. Czerny -Turner mount, Double beam, high performance blazed holographic grating-grating type double monochromator system to ensure high resolution and low stray light level across the wide measurement range.</p> <p>2. Instrument must incorporate factory pre-aligned Deuterium and Tungsten-Halogen sources. Automatic adjustment should be present inside the instrument for automated wavelength accuracy validation and light source position. Automatic switching synchronized with wavelength switching selectable between 282 – 393 nm range (0.1 nm increments or better).</p> <p>3. The Solar Material Testing Facility: UV-Visible-NIR Optical Measurement must be fitted with three detectors to achieve high sensitivity in the NIR range.</p> <p>4. NIR quartz cell, powder holder should be supplied with instrument.</p> <p>5. Software operation should be user friendly with controlled operation, data collection and analysis.</p> <p>6. The system should be plug and play type and easy to install or to be removed.</p> <p>7. The system has to be optimized for standard/reference sample and to be successfully demonstrated at our site.</p> <p>8. The instrument must allow standard RS232C or USB communication with PC.</p> <p>9. All cables and connectors to be provided for full operation of the system</p> <p>10. Complete product catalog describing all the required basic and optional items should be produced.</p> <p>11. Functions should be available to introduce temperature dependent upgrade accessories in future.</p> <p>12. OEM should have application lab and service facility in India for support.</p> <p>13. The instrument should be flexible to incorporate spare-parts to enhance operation range and future expandability to support a wide range of experimental needs.</p>
<b>Technical Specification</b>	
<b>Essential</b>	<p>1. Wavelength Range: 185 nm - 3300 nm (Minimum or better).</p> <p>2. Detector: PMT, InGaAs and Cooled PbS</p> <p>3. Wavelength accuracy: <math>\pm 0.2</math> nm in UV-Vis range and <math>\pm 0.8</math> nm in NIR region (Minimum or better).</p>

	<p>4. Wavelength reproducibility: <math>\pm 0.08</math> nm in UV-Vis range and <math>\pm 0.3</math> nm in NIR region (Minimum or better).</p> <p>5. Spectral Bandwidth: 8 steps (0.1 nm - 8 nm) in UV-Vis region and 10 steps (0.2 nm - 32 nm) in NIR range (Minimum or better).</p> <p>6. Resolution: <math>\pm 0.1</math> nm in UV-Vis range and <math>\pm 0.5</math> nm in NIR region (Minimum or better).</p> <p>7. Strain light (T%): 0.00008% (220 nm, NaI), 0.00005% (340 nm, NaNO<sub>2</sub>), 0.0005% (1420 nm, H<sub>2</sub>O), 0.005% (2365 nm, CHCl<sub>3</sub>) (Minimum or better).</p> <p>8. Baseline flatness: <math>\pm 0.001</math> A (Minimum or better)</p> <p>9. Wavelength Sampling Pitch: 0.01 nm (Minimum or better)</p> <p>10. Baseline stability: 0.0002 Abs/hr at 500 nm (Minimum or better).</p> <p>11. Scan speed: 4500 nm/min (UV-Vis), 4000 nm/min (NIR PbS), 9000 nm/min (NIR-PMT/InGaAs) (Minimum or better).</p> <p>12. Photometric range: -6 to +6 Abs in UV-Vis-NIR range (Minimum or better) in double beam photometric system.</p> <p>13. Photometric accuracy (using NIST filter): <math>\pm 0.003</math> (1A), <math>\pm 0.002</math> (0.5A) (Minimum or better).</p> <p>14. Photometric Noise: 0.00005 Abs (500 nm), 0.00008 Abs (900 nm), 0.00003 Abs (1500 nm) (Minimum or better)</p>
	<p><b>Integrating Sphere specification:</b></p> <p>1. Size: Sample chamber should accommodate with 60 mm inner diameter Integrating Sphere (minimum or better) for best suitable result. All type of sample holders (Solid, Liquid and Film) for Integrating sphere should be provided for measurement of diffuse/specular reflectance of solid samples and transmission of liquid or solid samples.</p> <p>2. Detector: Must be Combination of three detectors – PMT, InGaAs and PbS.</p> <p>3. Wavelength range: 220 nm – 2600 nm (Minimum or better)</p> <p>4. Standard material BaSO<sub>4</sub> for integrating sphere should be provided.</p>
<b>software specifications</b>	
	<ul style="list-style-type: none"> <li>▪ Software Operation should be user friendly</li> <li>▪ Measurement modes: Spectrum, quantitation, photometric, and time course Save data files, parameter files, and template files, Retain history of changes to data files and parameter files. Manage sample information (sample name, sample ID, comments, etc.). Specify all sample information settings before measurements. Control automatically from external application. Real-time display of wavelength, photometric value, and concentration values Graph settings (line type, line colour, etc.), Adjust graph scale or use auto-scale. Automatically send measurement data to Excel spreadsheet.</li> <li>• Automatically output measurement data in text format. automatically analyse data after measurements (evaluation function, peak detection, extract photometric value for specified wavelength, calculate area, correction, and conversion). Automatically print report after measurements. Overlay spectral waveforms. Analysis and pass/fail judgment using spectral evaluation function</li> </ul>

	<p>Data processing (detect peaks, extract photometric value of specified wavelength, calculate area) Correction (dilution factor correction, optical path length correction, etc.) Conversion (smoothing, differentiation, etc.)</p> <ul style="list-style-type: none"> <li>▪ Quantitation for specified wavelengths (one wavelength, difference between two wavelengths, ratio of two wavelengths, three wavelengths) Quantitation based on maximum/area spectrum value Single-point calibration curve, multi-point calibration curve, K-factor method Calibration curve method (first to third-order equations) Correct dilution factor for each sample. Specify weighting factors for each sample (standard samples). Concentration value pass/fail judgment Perform repeated measurements</li> </ul>
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### **Installation & Commissioning**

<b>Essential</b>	<ul style="list-style-type: none"> <li>➢ Installation and commissioning of the equipment has to be carried out by supplier at our laboratory in site and the performance has to be demonstrated.</li> <li>➢ Onsite training must be provided to our personnel on the installed equipment for operation and data processing at free of cost.</li> </ul>
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### **Instrument Control**

<b>Essential</b>	<ul style="list-style-type: none"> <li>➢ A Desktop computer, Windows Operating System (OEM) shall be provided with required Configuration.</li> </ul>
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### **Warranty**

<b>Essential</b>	System shall be warranted for a minimum period of 1 year from the date of installation of the equipment at site.
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### **Maintenance**

<b>Essential</b>	<ul style="list-style-type: none"> <li>➢ The system Should be plug &amp; play type and easy to install or to be removed.</li> <li>➢ OEM should have application lab facility in India for support.</li> <li>➢ Service facilities should be available in Karnataka.</li> <li>➢ Please provide service center details along with contact numbers in India.</li> </ul>
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## **5. Technical Bid**

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

The Chairperson,  
Attn: Dr. Sachin R. Rondiya (Assistant Professor)  
Department of Materials Engineering,  
Indian Institute of Science  
Bangalore – 560012, India

## Annexure 1

### Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Sl. No.	Items	Details
1	Name of the Bidder	
2	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3	Registration No/ Trade License, (attach attested copy)	
4	Registered Office Address	
5	Address for communication	
6	Contact person- Name and Designation	
7	Telephone No	
8	Email ID	
9	Website	
10	PAN No. (attach copy)	
11	GST No. (attach copy)	

Signature of Bidder

Name

Designation, Seal

Date:

Annexure-2

Declaration regarding experience

To,  
The Chairperson,  
Materials Engineering Department,  
Indian Institute of Science  
Bangalore – 560012, India

Ref: Tender No: MT/SRR/2025/OS-1

Dated: 16/12/2025

Supply and Installation of Solar Material Testing Facility: UV-Visible-NIR Optical Measurement.

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has \_\_\_\_\_ years of experience in supplying and installing Material Testing Facility: UV -Visible -NIR Optical Measurement. with asked technical specifications.

(Signature of the Bidder)

Printed Name

Designation, Seal Date:

Annexure-3

Declaration regarding track record

To,  
The Chairperson,  
Materials Engineering Department,  
Indian Institute of Science  
Bangalore – 560012, India

Ref: Tender No: MT/SRR/2025/OS-1

Dated: 16/12/2025

Supply and Installation of Solar Material Testing Facility: UV-Visible-NIR Optical Measurement.

Dear Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred /blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

Sl. No.	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure-4

Declaration for acceptance of terms and conditions

To,  
The Chairperson,  
Materials Engineering Department,  
Indian Institute of Science  
Bangalore – 560012, India

Ref: Tender No: Tender No: MT/SRR/2025/OS-1

Dated: 16/12/2025

Supply and Installation of Solar Material Testing Facility: UV-Visible-NIR Optical Measurement.

Dear Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date:

## Annexure-5

Details of items quoted:

a. Company Name	
b. Product Name	
c. Part/Catalogue Number	
d. Product description / main features	
e. Detailed technical specifications	
f. Remarks	

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

## 6. Commercial bid

**The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:**

Sl. No.	Description	Cat. Number	Quantity	Unit price	Sub total
1.	Essential items noted in the technical specification				
1.a	... (details of essential items)				
1.b	...				
2.	Optional items noted in the technical specification				
2.a	....(details of optional items)				
2.b	.....				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty (1 year)				

Any additional item

Sl. No.	Description	Cat. Number	Quantity	Unit Price	Sub total

Addressed to  
The Chairperson,  
Attn: Dr. Sachin R. Rondiya (Assistant Professor)  
Materials Engineering, Indian Institute of Science  
Bangalore – 560012, India

## **7. Checklist**

**(This should be enclosed with technical bid- Part A)**

**The following items must be checked before the Bid is submitted:**

1. Sealed Envelope “A”: Technical Bid

1. Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:

Annexure 1: Bidders details

Annexure 2: Declaration regarding experience

Annexure 3: Declaration regarding clean track record

Annexure 4: Declaration for acceptance of terms and conditions

Annexure 5: Details of items quoted

2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

2. Sealed Envelope “B”: Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribbling on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.