



Indian Institute of Technology Jodhpur

N.H. 62, Nagaur Road, Karwar, Jodhpur - 342030, Rajasthan (India)

☎ 0291-2801602 | ✉ office_physics@iitj.ac.in

Website Department: <https://www.iitj.ac.in/physics> | IITJ: www.iitj.ac.in

INDIAN INSTITUTE OF TECHNOLOGY JODHPUR

Request For Technical Information and Pro Forma Quotations

UV-Vis Spectroscopy

1. Introduction

The Indian Institute of Technology Jodhpur (IIT Jodhpur) intends to procure a **UV-Vis Spectroscopy** for academic and research purposes.

Before initiating the formal procurement process, the Institute invites **Technical Information And Indicative Pro Forma Quotations** from eligible Original Equipment Manufacturers (OEMs) or their authorized representatives.

2. Purpose

The objectives are to:

- Obtain technical information from prospective OEMs/authorized representatives.
- Obtain indicative Pro forma quotations for estimating the procurement cost.

3. Disclaimer

This document is issued **only for obtaining technical information and indicative Pro Forma quotations**.

Submission of information under this proposal:

- shall **not** be treated as a financial bid;
- shall **not** constitute any commitment on the part of IIT Jodhpur to procure the equipment;
- shall **not** confer any right upon the participating firm for award of any future contract;
- shall **not** automatically qualify the responding firm for participation in any future tender.

The Institute reserves the right to modify the technical specifications, estimated cost, procurement methodology, or procurement timeline based on its requirements.

4. Equipment Details

- Name of Equipment: **UV-Vis Spectroscopy**
- Quantity: 01
- Broad Functional Requirements (The essential functions or capabilities that the equipment should have, without mentioning a specific make, model, or brand):



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(The above requirements are indicative and may be revised after evaluation of the responses.)

Technical Specifications for UV-Vis Spectroscopy

Specification	Minimum Technical Requirement
System Type	Fully integrated UV Vis spectroscopy setup covering the wavelength range of interest from 180nm-3300nm
Applications	For analyzing the reflection, transmission as well as absorption characteristics of a sample of interest in different form such as liquid, powder, thin film.
Materials/Target Samples	1. For Solid Samples: minimum: 5mm X 5mm, maximum: 6 inches 2. Preferable thickness of thin film sample: minimum up to 10nm 3. For Liquid Samples –Approx. 10ml 4. Micro Multi-Cell Holder for High throughput microvolume (100 uL) measurements. Multi-cell Holder 5. For Powder Samples- Approx. 20mg Pellets, Crystals, Optical coatings
Wavelength Range	180 (or lower) to 3300 nm (or better)
Spectral Bandwidth	0.01 to 5 nm with 0.01 nm step size (UV-Vis region) and 0.04 to 20 nm (NIR region)
Resolution	0.03 nm or better in UV-Vis range and 0.1 nm or better in NIR
Wavelength Accuracy	$\pm 0.05\text{nm}$ in UV-Vis range and $\pm 0.2\text{ nm}$ in NIR range
Temperature Dependent Measurement	1. Temperature range: $-30\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$ 2. Temperature Stability: $\pm 0.1\text{ }^{\circ}\text{C}$ or better 3. Temperature Accuracy: $\pm 0.5\text{ }^{\circ}\text{C}$ or better 4. Temperature Resolution: $0.1\text{ }^{\circ}\text{C}$ 5. Heating and colling by fully software controlled with automatic ramp, hold and cycling



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Light Source	Deuterium lamp for UV region, Tungsten-Halogen lamp for Visible and NIR region. And the automatic lamp switching is must.
Detector	For UV-Vis region: Photo multiplier tube (PMT) For NIR Region: Peltier cooled PbS detectors.
Mode of operation	1. Direct transmission and variable angle transmission from 0–90° in 0.02° intervals 2. Absolute specular reflection at variable angle from 5–85° in 0.02° intervals 3. Diffuse scattering, reflection or transmission through independent sample rotation (360°) and detector positioning between 10–350° at 0.02° intervals 4. Absorption, A where $A = 1 - R - T$ at variable angle without moving the sample or beam onto the sample for improved productivity and greater accuracy. (Automatic calculation in software In A, R and T) 5. 150 mm Spectralon-coated integrating sphere for total hemispherical reflectance and transmittance. 6. Certified 99% Spectralon reflectance standard and black reference standard. 7. Integrating sphere compatible over the full 180–3300 nm wavelength range.
Beam Alignment	Computer-controlled beam alignment with adjustable beam position.
Data Acquisition	Real-time digital acquisition and display.
Software	Dedicated UV-Vis software on for automatic and instant data recording after just hitting the start button with the following abilities: • Instrument control • Temperature control • Automatic wavelength calibration • Baseline correction • Dark correction • Absorbance • Transmittance • Reflectance • Absorptance



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	• Diffuse reflectance • Variable-angle measurements • Kramers–Kronig analysis (if applicable) • Tauc plot generation • Bandgap estimation • Peak analysis • Derivative spectroscopy • Spectral overlay • Kinetic measurements • Time-dependent measurements • Temperature-dependent spectral acquisition • Batch measurements • ASTM E903 / ASTM G173 solar reflectance calculation in the software.
Data Export	TIFF, BMP, PNG, JPEG, CSV, PDF, and other standard formats.
Operating System	Computer System with latest version.
Installation	Complete installation, calibration, commissioning, acceptance testing, and demonstration at the user's laboratory.
Training	Minimum 3 days on-site operation, software, application, and maintenance training.
Documentation	Operation manual, service manual, calibration certificate, software manual, electrical drawings, and test reports.
Warranty	Minimum 3 years comprehensive onsite warranty , including software updates, spare parts, and technical support.
Compliance	CE, IEC radiation safety standards, ISO-certified manufacturing facility, and applicable electrical safety standards.

5. Eligibility Criteria

Interested firms should:

- Be an Original Equipment Manufacturer (OEM) or an authorized distributor/dealer.
- Have experience in supplying similar equipment.
- Have adequate installation and after-sales service support in India.



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6. Information/Documents to be Submitted

The interested firms shall submit the following (*Annexure-I*):

1. Company Profile.
2. Details of the OEM.
3. Product Brochure/Catalogue.
4. Detailed Technical Specifications.
5. Compliance with the Broad Functional Requirements.
6. List of previous users/clients with installation reports
7. Details of Warranty.
8. Details of After-Sales Service Support.
9. Authorization Letter from OEM (where applicable).
10. Any additional technical information relevant to the offered equipment.

7. Pro forma Quotation

- Interested firms are requested to submit a Pro forma Quotation (*Annexure-II*) along with their Request For Technical Information and Pro Forma Quotations response. Indicative **Pro Forma** quotation in Indian Rupees (INR), including the cost of the equipment, essential accessories, taxes, duties, freight, insurance, installation, commissioning, training, and any other associated charges. Wherever applicable, the Annual Maintenance Contract (AMC) and/or Comprehensive Maintenance Contract (CMC) charges and spare parts shall be quoted separately as additional charges.
- Expected delivery schedule and other relevant technical and commercial information.

Important Note:

- The **Pro Forma** quotation is required only for cost estimation and budget planning purposes.
- The prices quoted shall be indicative/non-binding.
- The Pro Forma quotation shall not be treated as a financial bid.
- Submission of a **Pro Forma** quotation shall not confer any right or preference in the subsequent procurement process.

8. Presentation/Demonstration

The Institute may invite for a technical presentation or product demonstration. The date and venue shall be communicated separately.

9. Submission:

Interested firms may submit their Proforma Quotations on or before the due date in sealed cover or through email (as applicable).



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The envelope/email should be superscribed as:

"Request For Technical Information and Pro forma Quotations for Procurement of UV-Vis Spectroscopy"

8. Important Dates

Activity	Date
Publication	23 th July 2026
Last Date for Submission	30 th July 2026
Technical Presentation (if required)	To be informed
Clarification Meeting (if required)	To be informed

10. General Terms & Conditions

1. This **Request For Technical Information and Pro forma Quotations** is issued only for obtaining technical information and **Pro Forma** estimates.
2. The Institute reserves the right to accept or reject any or all responses without assigning any reason.
3. Submission of an **Request For Technical Information and Pro forma Quotations** does not create any contractual obligation.
4. The Institute may seek additional information, technical clarifications, demonstrations, or presentations from any participant.
5. The Institute may modify the technical requirements based on the responses received.
6. The final technical specifications may be prepared by the User Committee after evaluating all **Request For Technical Information and Pro forma Quotations** responses.
7. The subsequent procurement, if any, shall be carried out through an appropriate procurement method in accordance with the GFR 2017 and applicable procurement rules.
8. Participation in this **Request For Technical Information and Pro forma Quotations** does not automatically entitle any firm to participate in or receive any preference during the subsequent tender process.

11. Contact Details

Name: Dr. Sagar Kumar Verma

Designation: Assistant Professor

Department: Physics

Email: sagarkv@iitj.ac.in



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Annexure-I

Request For Technical Information and Pro forma Quotations Response Format

1. Name of the Firm:
2. Registered Address:
3. Name of OEM (if applicable):
4. Contact Person:
5. Email:
6. Phone:
7. Product Name and Model:
8. Brief Technical Description:
9. Compliance with Broad Functional Requirements:
10. List of previous users/clients with installation reports:
11. After-Sales Service Details:
12. Any Additional Features:
13. Remarks (if any).



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Annexure-II

Format for Pro forma Quotation

Sl. No.	Description	Amount (INR)
1	Indicative Pro forma quotation in Indian Rupees (INR), including the cost of the equipment, essential accessories, taxes, duties, freight, insurance, installation, commissioning, training, and any other associated charges.	

Warranty Period: _____

AMC/CMC Charges (after warranty): _____

Delivery Period: _____

Authorized Signatory

Name: _____

Designation: _____

Company Seal & Signature