NOTICE INVITING QUOTATIONS

Item Name: TE cooled Fiber Optic Spectrometer and Accessories

Due Date: 26-03-2013

Quotations are invited for the purchase of a **TE cooled Fiber Optic spectrometer with Light source and its related Accessories** as per the specifications given below. **Quotations** (technical and financial bids in separate envelopes) plus **additional details**, should reach by **5 PM on 26-03-2013**.

<table>
<thead>
<tr>
<th>Equipment with specifications</th>
<th>Technical Specifications</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TE Cooled Fiber optic Spectrometer</strong></td>
<td></td>
<td>01 Set</td>
</tr>
<tr>
<td>Optical Bench of spectrometer</td>
<td>Symmetrical Czerny-Turner type</td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td>250 (±5) x 180(±5) x 145 (±5) mm</td>
<td></td>
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<tr>
<td>Weight</td>
<td>Maximum 4 Kg</td>
<td></td>
</tr>
<tr>
<td>Stray light</td>
<td>≤0.05%</td>
<td></td>
</tr>
<tr>
<td>Grating</td>
<td>300 lines/mm</td>
<td></td>
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<tr>
<td>Focal length</td>
<td>75mm</td>
<td></td>
</tr>
<tr>
<td>Wavelength range</td>
<td>≤300- ≥100nm</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>1 nm</td>
<td></td>
</tr>
<tr>
<td>Detector</td>
<td>Thermo electric cooled CCD; 2048 pixels</td>
<td></td>
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<tr>
<td>Pixel size</td>
<td>Each pixel 12 (±2) µm × 180 (±20) µm</td>
<td></td>
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<tr>
<td>Temperature cooling of CCD</td>
<td>Peltier cooling with internal power supply, maximum T= -35° C versus ambient temperature</td>
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<tr>
<td>Time to stabilize</td>
<td>Maximum 5 minutes</td>
<td></td>
</tr>
<tr>
<td>Integration time</td>
<td>5ms- 5 minutes</td>
<td></td>
</tr>
<tr>
<td>Quantum efficiency</td>
<td>≥40% within 300-700 nm wavelength range</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>USB 2.0 high speed</td>
<td></td>
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</tbody>
</table>
Digital IO: USB connector, USB Cable and Digital IO should be included
Connector: FC/PC Fiber optic connector
Slit Size: 10 µm width, 1mm height.

**Light Source**

- **Type of Source**: Balanced Deuterium-Halogen light source
- **Lamp Power**: 50-100W for balanced Deuterium, 5W for balanced Halogen
- **Shutter**: TTL shutter
- **Wavelength Range**: ≤ 300 - ≥ 2100nm
- **Optical Power**: 15-60µW
- **Warm up time**: < 30 minutes
- **Noise**: Order of 10^-4 dB or less
- **Lamp Lifetime**: Minimum 1000 hours
- **Power**: 230±10 V AC
- **Power supply**: Power supply should be provided

**Reference tile for diffuse reflection measurements**

- **Material**: White diffused PTFE material
- **Diameter**: 30mm
- **Thickness**: 10mm
- **Wavelength Range**: ≤ 300 - ≥ 2100nm

**Standard Reflection probe**

- **Length**: Minimum 2 meters with splitting point in the middle
- **Bend radius**: Minimum bend radius 30 mm.
- **Sheathing**: Flexible metal sheathing with silica window for liquid and powder
- **Fibers**: 7 Fibers with core diameter 200µm (6 light
fibers, one read fiber)

Probe end: Stainless steel, 50mm long
Diameter: 6.5mm

**Reflection Probe Holder**

Options: To mount the standard reflection probes at 45° (diffuse reflection) and 90° (specular reflections)
Diameter of holes: To accommodate 6.5mm dia reflection probe
Material: Black aluminum

**Fiber optic Cable for Transmission studies**

Fiber: 200µm fibers with FC/PC terminations
Length: Minimum 2 meters
Software: Data acquisition should be computer controlled and the Supporting spectrometer software compatible with Windows XP/VISTA/7, 32 /64 bit system (Preferably for Windows 7 and 64 bit system) should be provided.

**Other Requirements:**

1. The spectrometer should be controllable through USB port. Relevant controller software, drivers, electronics, cables should be provided. Relevant drivers for external programming (such as Labview) should be provided.
2. Minimum one year warranty and service is required.

**Additional Details (without these, quotations will be rejected):**

1. Furnish brochure cum data sheets for the above specifications from the original manufacturer & Proprietary certificate (if the item is proprietary) by the principal should be provided along with the Technical Bid.
2. Furnish a list of recent customers (Address, Email & Phone No.) where the specific product (TE cooled fiber optic spectrometer) has been supplied.
TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS

1. **CUSTOM DUTY:** IIT Delhi is exempted from paying custom duty under notification No. 51/96 (Partially or fully) and necessary “Custom Duty Exemption Certificate” can be issued after providing following information.
   a) Shipping details i.e. Master Airway Bill No. And House Airway No. (if exists)
   b) Forwarder details i.e. Name, Contact No. etc.

   Custom Duty Exemption Certificate will be issued to the shipment in the name of the institute and Bills of Entry should be submitted to IIT Delhi later on.

2. **BIDDING:** Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid. But both cannot bid simultaneously for the same item/product in the same tender. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

3. **EXCISE DUTY:** IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information is required.
   a) Quotation with details of Basic Price, Rates & amount on which ED is applicable

4. **PRICING:** Quote total in F.O.B. price.

5. **TERMS OF PAYMENT:** Letter of credit (90% payment against shipping documents and balance 10% after satisfactory installation) OR Payment against delivery (Wire Transfer after receipt of item).

6. **VALIDITY OF QUOTATIONS:** Quotations should be valid at least for a period of 90 days.

7. **WARRANTY:** Three years comprehensive warranty be provided and AMC price beyond 3 years should be mentioned separately.

8. **DEALERSHIP CERTIFICATE:** Letter from manufacturer to be attached for authenticity of dealership/agency. Quotations without authorized dealership certificate will be rejected.

9. **PROPRIETARY CERTIFICATE:** If the items are proprietary in nature, furnish a copy of the certificate

10. **COMPLIANCE STATEMENT:** Please include a statement of compliance of all the above specifications

11. **INSTITUTE’S RIGHTS:** IIT Delhi reserves the rights of acceptance or rejection of any or all quotations.

12. **REJECTION:** Quotations not conforming to the set procedure as above will be rejected.

13. **DISCOUNT/REBATES:** Special discount/rebate wherever admissible keeping in view that the supplies is being provided for the educational purpose in respect of public institution of national importance may please be indicated.

14. **SUBMISSION OF QUOTATIONS:** Quotations should be sent in a sealed cover marked at the top ITEM NAME AND DUE DATE.

   The technical and financial bids should be sealed in separate envelopes before putting them together in the sealed cover. (Please note that ALL of the above specifications and additional details must be fully met in the technical bid).

Quotations should be sent to:

Prof. Joby Joseph  
Department of Physics  
Indian Institute of Technology, Delhi,  
Hauz Khas  
New Delhi-110 016  
India