

**INDIAN INSTITUTE OF TECHNOLOGY DELHI  
HAUZ KHAS, NEW DELHI- 110016**

Ref. No.: IITD/PHY/RP-2455/FOS/2013/02

Date: 11-03-2013

**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**.

<b><u>Equipment with specifications</u></b>	<b><u>Technical Specifications</u></b>	<b><u>Quantity</u></b>
<b><u>TE Cooled Fiber optic Spectrometer</u></b>		<b><i>01 Set</i></b>
Optical Bench of spectrometer	: Symmetrical Czerny-Turner type	
Dimension	: 250 (±5) x 180(±5) x 145 (±5) mm	
Weight	: Maximum 4 Kg	
Stray light	: 0.05%	
Grating	: 300 lines/mm	
Focal length	: 75mm	
Wavelength range	: 300- 1100nm	
Resolution	: 1 nm	
Detector	: Thermo electric cooled CCD; 2048 pixels	
Pixel size	: Each pixel 12 (±2) μm × 180 (±20) μm	
Temperature cooling of CCD	: Peltier cooling with internal power supply, maximum T= -35 <sup>0</sup> C versus ambient temperature	
Time to stabilize	: Maximum 5 minutes	
Integration time	: 5ms- 5 minutes	
Quantum efficiency	: 40% within 300-700 nm wavelength range	
Interface	: USB 2.0 high speed	

Digital IO : USB connector, USB Cable and Digital IO should be included  
Connector : FC/PC Fiber optic connector  
Slit Size : 10  $\mu$ m width, 1mm height.

**Light Source**

**01**

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 : 15-60 $\mu$ W  
Warm up time : < 30 minutes  
Noise : Order of  $10^{-4}$  dB or less  
Lamp Lifetime : Minimum 1000 hours  
Power : 230 $\pm$ 10 V AC  
Power supply : Power supply should be provided

**Reference tile for diffuse reflection measurements**

**01set**

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

**Standard Reflection probe**

**01**

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 200 $\mu$ m (6 light

fibers, one read fiber)

Probe end : Stainless steel, 50mm long

Diameter : 6.5mm

**Reflection Probe Holder**

**01**

Options : To mount the standard reflection probes at 45<sup>0</sup>  
(diffuse reflection) and 90<sup>0</sup> (specular reflections)

Diameter of holes : To accommodate 6.5mm dia reflection probe

Material : Black aluminum

**Fiber optic Cable for Transmission studies**

**02**

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**