



Department of Electrical Engineering, Indian Institute of Technology, Delhi

Hauz Khas, New-Delhi -110016, India

NIQ no. IITD/EE/PLN03-BEEN

Due Date: **30.11.2011, 5 PM**

Notice inviting quotations for a Spectrometer

Sealed quotations are invited for a Spectrometer that can have a spectral range between 200 nm and 1100 nm. The purchase will be made through a two part bidding process. Technical and Financial bids have to be made separately. Complete technical information should be provided along with the Technical bid. Please refer to the page on Terms and Conditions for details on how and when to submit the Technical and Financial bids.

Required Specifications for the Spectrometer

1. The Detector spectral range should be Between 200 nm and 1100 nm.
2. Detector Sensitivity should be at least 130 photons/count at 400 nm, and at least 60 photons/count at 600 nm.
3. The minimum number of detector pixels present in the linear CCD detector should be 3648 pixels
4. The dynamic range of the system should be 2×10^8 and 1300:1 for a single acquisition.
5. The spectroscopic wavelength range (dependent on the grating employed) should be 200 nm to 1100 nm.
6. The signal-to-noise ratio should be at least 300:1 at full signal.
7. The dark noise should be at most 12 RMS counts.
8. Different choices of the width of the entrance apertures should be available. At least the following slit options should be available: 5 μm , 10 μm , 25 μm , 50 μm , 100 μm or 200 μm wide slits or optical fiber (no slit).
9. The highest optical resolution achieved should be at least 0.02 nm FWHM.
10. The Spectrometer should have an optical fiber connector.
11. The Spectrometer should be portable and its dimensions should be less than or equal to 6" x 4.5" x 2" and it should weigh less than 600 grams.
12. The warranty for the spectrometer should be at least 1 year.

Asst. Prof. A. Dhawan

(Principal Investigator)

Terms and Conditions

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and "Financial Bid" respectively. Both the sealed envelopes should be sent in a single sealed envelope, clearly marked as "Quotations for a Spectrometer". The quote should reach the following address on or before **30.11.2011, 5 PM**:

Dr. A. Dhawan
Block II, Room 216,
IIT Delhi, Hauz Khas,
New Delhi, 110016, India

2. Please quote prices at FOB New Delhi, inclusive of all taxes and duties.
3. Quote should be in Indian Rupees for Indian agents, or in foreign currency, for foreign agents, and needs to be valid for at least three months.
4. Attach all the technical literature and a list of similar installations done in India.
5. If the quote is being submitted by a representative of the manufacturer, a valid agency-ship or dealership certificate authorizing the agent to quote to IIT Delhi on behalf of the manufacturers should be enclosed.
6. Complete set of manuals for the operation of the equipment should be given.
7. Clearly specify the installation requirements – such as space, power, frequency, environment etc.
8. If the item quoted is proprietary in nature, please enclose proprietary certificate from the principals stating, "Certified that _____ is a proprietary of M/s _____ and no other manufacturer makes this item."
9. Please attach a signed and stamped compliance chart for the specifications. The format of the compliance chart is attached to this document.
10. Please specify all of your terms and conditions clearly, including delivery period.
11. Preferred modes of payment for foreign agents are through letter of credit, or as payment on delivery. For Indian agents, typically payment is on delivery.
12. The Institute reserves the right to accept or reject any or all quotations without assigning any reasons thereof.

Asst. Prof. A. Dhawan
(Principal Investigator)

Compliance Chart

	Parameter	Requirement	Model Spec	Complies
1	Detector range	200 nm to 1100 nm		
2	Detector Sensitivity	At least 130 photons/count at 400 nm At least 60 photons/count at 600 nm		
3	Detector Pixels	Minimum of 3648 pixels in a linear CCD Array		
4	Dynamic range	2×10^8 (system); 1300:1 for a single acquisition		
5	Spectroscopic wavelength range	200 nm to 1100 nm		
6	Signal-to-noise ratio	300:1 (at full signal)		
7	Dark noise	At most 12 RMS counts		
8	Entrance aperture	Variable Option Available from 5, 10, 25, 50, 100 or 200 μm wide slits or fiber (no slit)		
9	Highest Optical Resolution	0.02 nm FWHM		
10	Fiber optic connector	present		
11	Weight	Less than 600 grams		
12	Dimensions	Smaller than 6" x 4.5" x 2"		
13	Minimum warranty	1 year		