



**SATYENDRA NATH BOSE NATIONAL CENTRE FOR BASIC SCIENCES**  
[Funded by the Department of Science & Technology, Government of India]  
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Ref. SNB/ENQ/BG/Xe Light /14-15/141(WP)

01/05/2014

Dear Sir,

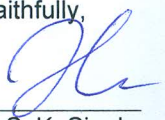
Sealed quotations is hereby invited for the following items in two parts (Technical and Commercial bids). One large envelope containing two smaller envelopes containing Part A: Technical Bid and Part B: Commercial Bid need to be submitted separately – Two smaller envelopes should be super-scribed "**Technical Bid**" / "**Commercial Bid**" as the case may be.

Sl. No.	PARTICULARS	Qty
01.	Xenon light source, monochromator Detector with Associated Optics Vendors are requested to quote for ALL the items and take care of installation. [ See attached sheet for detailed technical specifications]	01
Note: Attached herewith " <b>Annexure I</b> " (as check list) to be duly filled in by the bidder and should be submitted with the Technical Bid only. Offer received without any of the relevant information / certificate / document asked as per "Annexure I" from sl. nos. 01 to 18 may not be considered. The Centre reserves the right to accept or reject offer of the tenderer. The Centre's decision shall be final and binding on the tenderer. Attached documents should be duly marked.		
<b>Technical bid</b> should contain complete technical information literature/working manual of the quoted item, & authorization certificate of the manufacturer. <b>Price Bid</b> - In case of imported item CIF Kolkata airport price should be mentioned and for indigenous item FOR basis up to S. N. Bose Centre, kolkata may be quoted.		

Note:

- 1) The quoted price should be inclusive of delivery charges.
- 2) Validity should be for 90 days from the date of opening
- 3) Minimum one (1) year standard onsite warranty is to be provided.
- 4) Our Payment term is subject to after delivery and installation only.
- 5) Delivery period should be mentioned in the quotation.
- 6) Our ref. no. should be mentioned on top of the quotation envelope.
- 7) Quotation for the above item should reach this office by **21<sup>st</sup> May, 2014**

Thanking you,  
Yours faithfully,

  
S. K. Singh  
AR (Purchase)



### Technical specification:

#### Xenon light source, Monochromator , Detector with Associated Optics:

The system consists of followings:

Xenon Light source( or Probe light source) , monochromator, optical chopper, Bias Light Source , sample stages, Data acquisition system, Calibrated Si Detector ,ND filter, Sample holder ,Software, the system should have option to operate in DC and AC mode and also all the necessary pillar, posts, cables, interface and necessary software.

Brief specs of individual items:

1 . Monochromator:

Focal Length: 300 mm  
Relative Aperture: f/3.9  
Mechanical scanning range: 0-1200 nm  
Resolution: 0.1nm  
Reciprocal dispersion: 2.7 nm/mm  
Working accuracy: +/- 0.2 nm  
Wavelength repeatability: 0. 1 nm  
Grating size: 68 mm x 68 mm  
Triple grating turret, 1200//mm grating  
USB 2.0 interface

2. 150W Xenon Light Source

Spectral Range 250-1800nm  
Stability of Current :  $\leq 0.05\%$  ( @8.5A )  
Input Voltage: 110/220V AC  $\pm 10\%$

3. *Calibrated Si Detector*

Calibrated Spectral range : 300-1100nm with 1% system repeatability in visible range

4. Optical Chopper:

Chopper frequency	400 Hz to approximately 4 KHz with different slot blades.
Frequency stability	Around 200-300 ppm/°C
Frequency drift and Phase jitter	Less than or around 2% with rms phase jitter less than 0.50°
Frequency display	4-digit, 1 Hz resolution and accuracy
Input control voltage	0 to 10 VDC for 0 to 100% of full scale. Control voltage overrides frequency dial.
Reference modes	$f_{inner}$ , $f_{outer}$ , $5 \times f_{outer}$ , $f_{inner} + f_{outer}$ , $f_{outer} - f_{inner}$
Blade diameter	3"-4" range 4.04" $\pm 0.002$ "

5. 75W Tungsten Bias Light Source with Shutter Control

6. Neutral Density Filter e with Optical density varying between 0.1 to 1 . Minimum number per set =5 , Qty: 2 sets of ND Filters with dual Filter wheel should be able to hold max of 12 1 inch size filters.

7. Manual 3 axes stage for sample holder. XY Traveling 50x50mm traveling and 5mm Z Axis

8. Sample holder for Electrode on back side

9. The system shall be able to work in both AC& DC mode.

Software for data acquisition for photoconductivity measurement of optical device support customer supplied Lock-in and source meter ( SR830 and Keithley 2400,) and related post,holder and cables.

The software should be able to control Keithley 2400 series source meters & SR830 lock in amplifier.



### Annexure I

- The following form should be submitted with the technical bid duly filled and signed.  
➤ **Relevant documents must be enclosed with the technical bid as per Sl. no. 01 to 18.**

S/N	PARTICULARS	Yes/No	REMARKS
01	Technical bid & Price bid duly sealed & signed enclosed in separate envelopes as instructed.		
02	<u>Contents of Technical bid</u> a) Technical details as per specification enclosed with technical bid ⇨ b) Technical Compliance Statement to be prepared in a separate sheet ⇨ (and any deviation should be mentioned specifically) c) Literature/Manual of the offered item ⇨ d) Current Authorization Certificate from the Principal Manufacturer ⇨ e) Name, address, email & ph. no. of users in India. (Preferably Research laboratories) ⇨ f) Copy of P.O. and installation certificate with the same specification from at least one user ⇨		
03	Delivery charges on F.O.R basis up to S. N. Bose Centre, Kolkata for indigenous items with detailed break-up of cost		
04	All applicable tax (VAT/CST/Sales/Service tax) should be mentioned		
05	Whether the price quoted is without excise duty, as the centre is fully exempted from payment of excise duty		
06	Copy of Trade License, VAT, PAN, Service Tax Registration no. enclosed with the technical bid.		
07	Installation charges included (if any) to be mentioned		
08	Standard warranty from the date of installation to be mentioned		
09	Payment after installation of material at site		
10	Payment mode should be mentioned		
11	Delivery/installation time from the date of PO to be mentioned		
12	Enquiry no. should be mentioned on top of all quotation envelopes		
13	Validity of Quotation should not be less than 90 days from the date of submission		
14	Maintenance procedure of the offered item to be mentioned		
15	Contact details of after sales service centres in Kolkata to be mentioned		
16	Bank details of the beneficiary to be mentioned		
17	In case of any defect found after receipt of material or in case of any deviation from the specifications or in case of any operational defect found during the warranty period, any part or the entire material is to be replaced by the supplier at no extra cost to the Centre.		
18	Whether your company has been blacklisted by any Central/State Govt. organization.		

**Note:** Offer received without any of the relevant information / certificate / document asked in the above sl. nos. 01 to 18 may not be considered. The Centre reserves the right to accept or reject offer of the tenderer. The Centre's decision shall be final and binding on the tenderer. Attached documents should be duly marked.

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Seal & Signature with date