

Department of Electrical Engineering Indian Institute of Technology Delhi

NIQ no. IITD/EE/PLN06-BEEN/IEC/MSC4

Close time: 29.01.2014, 12 PM

Notice inviting quotations for Solar Simulator

Sealed quotations are invited for a Solar Simulator. The required specifications are given below. 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 Terms and Conditions on the next page for details on how and when to submit Technical and Financial bids.

Required specifications for Solar Simulator

1. Continuous wave operation small footprint solar simulator for solar cell testing in a research setting.
2. Integrated automatic cooling system (such as fan) if needed. No lab cooling system can be presumed.
3. Regulated power supply. Line regulation: 0.03% or better. Preferable: automatic feedback.
4. AM1.5G operation at 1.0 sun output. Variable attenuator. Integrated filter holder. AM0 filter should be included in the quote.
5. Illumination area: at least 1.3" x 1.3" (or dia).
6. Working distance > 6". Measured dependence of output power on working distance should be provided.
7. Collimation angle < 6 degrees.
8. Light ripple < 0.5% rms.
9. Spectral match compliance: A (ASTM E927 – 05). Spectral match (each interval) in 0.75-1.25% range, or better.
10. Beam non-uniformity (minimum): B (ASTM E927 – 05). Irradiance spatial non-uniformity <=5%, or better.
11. Temporal instability (minimum): B (ASTM E927 – 05). Temporal instability <=5%, or better.
12. Certificate of compliance with the ASTM standard above must be provided. Measurements of degree of compliance with current relevant IEC and JS must also be included.
13. Lifetime of light source must be rated for at least 1000 hours.
14. If the system is lamp based: quote should include a) one additional lamp, and b) lamp replacement service (for the extra lamp purchased via this quote and any future lamp purchases within warranty period) when needed and post-replacement testing and calibration to meet the ABB (minimum) standard (specification of variable attenuator setting to achieve that result is acceptable).

15. Quote should include a calibrated reference cell with thermocouple (IEC 60904-2 compliant) and meter. NIST ISO-17025 compliance. Windows may be quartz or KG.
16. Shutter mechanism to quickly place sample in dark. Can be manual or electronic.
17. Quote must include a mounting mechanism for normal operation.
18. The overall system should be small in footprint and containable in a standard glove box, while leaving enough working room for its use.
19. Warranty: 3 year comprehensive on-site warranty is required
20. Delivery and installation: Within 1 month of placed order

Dr. Madhusudan Singh
(Chairman, purchase committee)

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 "Quotation for Solar Simulator". The quote should reach the following address on or before **29.01.2014, 12 PM**.

Dr. Madhusudan Singh
Department of Electrical Engineering
Block II, Room 236
IIT Delhi, Hauz Khas
New Delhi 110016, India

2. Please quote prices of imported items at FOB (Freight on Board) IIT Delhi inclusive of all taxes, freight, delivery, installation and onsite training charges. The quotation should provide the total price of the system including all taxes and transportation charges.
3. Quote should be in Indian Rupees for agents of Indian manufacturers, or in foreign currency, for agents of foreign manufacturers, and needs to be valid for at least three months.
4. In case IIT Delhi is imposed with demurrage charge due to import on CIF, the entire demurrage charge has to be borne by the Indian Agent of foreign supplier.
5. Attach all the technical literature and a list of similar installations done in India. A table of compliance for all the points in specifications with authentic signature must be supplied. This is required for the evidence of confirmation of the specifications. Without this, your quotation will NOT be considered.
6. The vendor must have a website with a credible domain name that has existed prior to the floating of this tender and the specifications, manuals and any other relevant documentation for this equipment must be free to download from that website, independent of the supplied literature.
7. 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.
8. 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.
9. Complete set of manuals for the operation of the equipment should be provided.
10. Clearly specify the installation requirements - such as space, power, frequency, environment etc.

11. If the item quoted is proprietary in nature, please enclose proprietary certificate from the principals stating: "Certified that is a proprietary item of M/s and no other manufacturer makes this item."
12. Please specify all of your terms and conditions clearly, including delivery period.
13. Mode of payment for purchases in foreign currency are through irrevocable letter of credit, or through wire transfer on delivery. Only bank charges within India are payable by IIT Delhi, all bank charges outside India are the responsibility of the seller. For purchases in INR, payment is on delivery.
14. 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.
15. IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required.
 - a. Quotation with details of Basic Price, Rate & Amount on which ED is applicable.
16. The Institute reserves the right to accept or reject any or all quotations without assigning any reasons thereof.

Dr. Madhusudan Singh
(Chairman, purchase committee)

Email: msingh@ee.iitd.ac.in