Notice Inviting Quotations

Item: Infrared (IR) camera

Date: 29 November 2012

1. Sealed quotations are invited in Indian Rupees (INR) from experienced manufacturers or their authorized representatives for supply of one (01) branded Infrared (IR) Camera conforming to technical specifications and prescribed terms and conditions as given hereunder. Interested parties are required to submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes; these should be marked 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 Infrared Camera”. The Quotations should be addressed to: Prof. S R Kale and submitted in the Department of Mechanical Engineering, IIT Delhi, Hauz Khas, New Delhi 110016 latest by 5:00 PM on 24 December 2012.

2. Number of IR camera required: One (01)

3. Technical specifications

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<tr>
<th></th>
<th>Description</th>
<th>Specification</th>
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<tbody>
<tr>
<td>1</td>
<td>Temperature measuring range</td>
<td>25 to 2000 °C</td>
</tr>
<tr>
<td>2</td>
<td>Spectral range</td>
<td>Within 1.5 – 5.5 μm</td>
</tr>
<tr>
<td>3</td>
<td>Resolution</td>
<td>640 x 512 pixels</td>
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<tr>
<td>4</td>
<td>Full Frame Rate</td>
<td>Programmable from 1 Hz to 100 Hz</td>
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</table>
| 5 | Sub windowing | Defined size and location
Frame rate of up to 850Hz in quarter frame mode |
| 6 | NETD | 25 mK or lower (reference temperature to be specified) |
| 7 | Integration Time | 1 μs to 20,000 μs in 1 μs steps |
| 8 | Measurement accuracy | ± 1% |
| 9 | Operating temperature range | -20 to 50°C |
| 10 | Spectral filters | (1) Flame filter
• Suitable for gaseous/liquid fuel diffusion flames
• to be mounted in filter wheel
• filter position to be controlled via software
• calibration of filter required.
Calibration of lens in the range of 300 – 1700 °C required.
(2) Through flame filter
• Suitable for gaseous/liquid fuel diffusion flames
• to be mounted in filter wheel
• filter position to be controlled via software
• calibration of filter required
Calibration of lens in the range of 300 – 1700 °C required |
<table>
<thead>
<tr>
<th></th>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>11.</td>
<td>Filter wheel</td>
<td>4 positions, motorized control for spectral filters</td>
</tr>
<tr>
<td>12.</td>
<td>Aperture Wheel</td>
<td>4 positions, motorized control to change calibration</td>
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</tbody>
</table>
|13.| Digital interface                                                       | GiGe / USB (with 25 m Ethernet cable)  
Data should be in non-proprietary Image/Video format                                            |
|14.| Computer/hardware required for operation of the camera                  | Required, included in scope and to be supplied.  
Configuration details to be indicated.                                                             |
Pixel wise emissivity correction, Digital data collected at the camera’s maximum imaging frequency onto the hard-disk or in the RAM.  
Online differential image mode and temperature profile display. External trigger option, re-trigger, multiple signal sequence. Freely definable temperature trigger. |
|16.| Output                                                                  | Should be in non-proprietary image/video format                                                  |
|17.| Tripod adapter                                                          | ¼” photo thread, required                                                                       |
|18.| Lens                                                                    | should be able to see 2.5 m x 2 m area from a distance of 3 m, minimum details resolved should be nearly 4.0 mm, minimum focus distance 10 cm. |
Cable and accessories to be supplied.                                                             |
|20.| Power supply                                                            | 220 V, 50 Hz                                                                                     |
|21.| Dust and splash water protection                                        | IP54                                                                                             |
|22.| Shock/Vibration                                                         | 2 G, IEC 68-2-29/26                                                                             |
|23.| Power cable                                                             | 20 m; to be supplied                                                                             |
|24.| Carrying case                                                           | Included in scope; to be supplied                                                                 |
|25.| Data cable                                                              | 10 m; to be supplied                                                                             |
|26.| Calibration and testing                                                 | Calibration tests are required to NIST, or equivalent,  
traceability. Details to be provided.                                                              |
|27.| Warranty                                                                | Comprehensive on-site warranty for three (03) years from the date of delivery is required.       |

4. Information to be provided with the technical bid

(a) Compliance table indicating adherence to each item of the technical specification (see Annexure A for format).

(b) List of customers to whom similar equipment/models have been supplied in the past five years. Please provide separate lists for supplies in India and abroad. Copies of purchase order may also be attached.

(c) List of certified service centre(s) for the quoted model(s) in India with supporting authorization letter.

(d) Relevant product brochure/leaflet for the model quoted. Details of interface and other hardware (including PC/laptop, if any) that are integral part of the system should be provided.
(e) In case the bidder is quoting separate models, these should be submitted in separate sealed covers (each containing the separate Technical and Financial Bid covers), clearly stating the model/make on the cover.

(f) Details of testing and certification processes, including process for compliance to international standards, traceability to NIST or equivalent standards, periodic calibration requirements and procedure for the same.

(g) Requirements for power supply and data transfer to a PC/laptop.

(h) In case the items are proprietary products of the company, a proprietary certificate stating the same should be provided.

(i) All information regarding items in section 5 below that are marked with '★'.

5. Terms and Conditions

(a) The validity of the quotation should be at least six (06) months from the last date for submission of quotations. A statement to this effect should be submitted. ★

(b) The delivery schedule should be submitted. ★

(c) Authorized agent/agency certificate if bidder is other then the manufacturer. ★

(d) Each bidder must submit the NEFT mandate form for registering as a vendor at IIT Delhi.

(e) Imported items should be quoted on FOB basis (Freight on Board) and FOB price be provided.

(f) Prices quoted shall be firm for the bid validity period. ★

(g) The price for options should be stated separately in the Financial Bid.

(h) Special discount/rebate, wherever admissible keeping in view that the supplies are being made for educational purpose in respect of public institution of national importance, should be offered and stated clearly.

(i) All applicable taxes should be clearly mentioned separately.

(j) The institute/committee reserves the right to accept or reject any or all bid/quotations without assigning any reasons.

(k) 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.
   1. Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists)
   2. 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.

(l) 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.
(m) IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which quotation with details of basic price, rate & amount on which ED is applicable are required.

(n) Three years comprehensive warranty be provided and AMC price beyond 3 years should be mentioned separately.

(o) Payment Options:

- **Letter of Credit**: 90% payment against shipping documents & balance 10% after satisfactory installation. For large purchase i.e. costing over Rs. 1 crore, 100% payment be made through LC.
- **Sight Draft**: Payment against documents through bank.
- **Against Delivery**: Payment by wire transfer after receipt of material.
- **Advance payment**: pre-payment by wire transfer (for orders less than Rs.5 lakh).

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P. I. Project RP 02224
Department of Mechanical Engineering
IIT Delhi, Hauz Khas
New Delhi 110016
Annexure A

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<tr>
<th>S.No.</th>
<th>Item</th>
<th>Specified technical requirement</th>
<th>Bidder's specification (To be filled by the bidder)</th>
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Date:

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