

**Instrument Design Development Centre  
Indian Institute of Technology Delhi**

**Date:11-02-2014**

**Sub: NOTICE FOR INVITING QUOTATIONS (NIQ) FOR SHACK-HARTMANN  
SENSOR**

Instrument Design Development Centre, IIT New Delhi requires Shack-Hartmann sensor. Broad specifications of the same are described below. Kindly send Technical and commercial bids for the same in **separate sealed envelopes**. Your bids must reach the address given below on or before **27-02-2014**.

**Specifications of Components:**

S. No.	Name of item	Specifications	Qty.
1.	Shack-Hartmann Sensor along with analysis software	<p>Sensor specifications</p> <ol style="list-style-type: none"> <li>1. Detector size: 3.6 x 4.6 mm<sup>2</sup> or bigger</li> <li>2. Camera resolution: ~ 640 x 480 pixels or more</li> <li>3. Camera pixel size: ~ &lt; 8 μm x 8 μm</li> <li>4. Number micro lenses in lenslet array: 30 x 28 or more</li> <li>5. Microlens pitch: approximately .13 x .13 mm<sup>2</sup> or smaller</li> <li>6. Focal length of each microlens: approximately 3.5 mm or better</li> <li>7. Operational wavelength range: Visible range</li> <li>8. Calibrated at wavelength: 632.8 nm (RED)</li> <li>9. Greyscales: 8 bits or higher</li> <li>10. Accuracy of the measurement (with reference): ~ λ/100 rms</li> <li>11. Angular accuracy of spots on camera: 8 μrad or better</li> <li>12. Evaluation rate: 50 Hz or higher</li> <li>13. Repeatability (rms) &lt; ~ λ/200</li> <li>14. USB interfaced</li> </ol> <p>The software capabilities should include:</p> <ol style="list-style-type: none"> <li>1. The data acquisition and analysis capabilities</li> <li>2. Zernike analysis</li> <li>3. Point spread function, Modular transfer function analysis</li> <li>4. Ability to re-analyse the data from the recorded raw data</li> <li>5. Possibility to remove tilt, power, coma, astigmatism, cylinder, user defined reference, residual</li> <li>6. Data Import / Export to Zemax, CodeV, Excel, ASCII, .bmp, .jpg. MATLAB</li> </ol>	One

**Terms and conditions covering submission of quotations:**

- Supply all technical specifications..
- Validity of the quotation should be at least for a period of three months.

- Clearly indicate whether the prices are inclusive of all taxes. Otherwise indicate all taxes separately.
- Letter from manufacturer to be attached for authenticity of dealership/agency.
- In case of proprietary item, the principals must submit a letter declaring it clearly as a proprietary item.
- The technical and financial bids should be sealed in separate envelopes before putting them together in the sealed cover.
- Payment terms: Letter of credit OR Payment against delivery (Wire Transfer after receipt of item).
- IIT Delhi reserves rights of acceptance or rejection of any or all quotations.
- Quotations should be sent to

**Prof. Chandra Shakher**  
**WS-140, IDDC, IIT Delhi**  
**Hauz Khas, New Delhi -110016, India**