



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान तिरुपति

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH TIRUPATI**

Transit campus: C/o Sree Rama Engineering College Campus, Rami Reddy Nagar,  
Karakambadi Road, Mangalam (B.O), Tirupati - 517 507

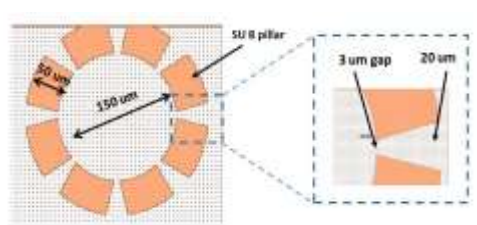
Website: [www.iisertirupati.ac.in](http://www.iisertirupati.ac.in)

## **CORRIGENDUM: TECHNICAL BID**

|                                |   |
|--------------------------------|---|
| <b>Tender Id</b>               | 2021_ISRTP_622964_1                             |
| <b>Tender Reference Number</b> | IISERT/PUR/0925/20                              |
| <b>Tender Title</b>            | Procurement of Maskless photolithography system |

With reference to the above tender the Corrigendum has been made due to change in technical specification.

| Sr.No | Existing Specification   | Amendment Specification  |
|-------|--|--|
| 01    | <b>Point number 3 &amp; 4</b> <ul style="list-style-type: none"><li>• Writing Tolerance: Tolerance must be typically less than 500 nm at highest resolution</li><li>• Writing resolution: 1 <math>\mu\text{m}</math> or better</li></ul>                                 | Minimum feature size that can be made: 1.5 $\mu\text{m}$ or smaller  |
|       | <b>Point 5 and 6</b> <ul style="list-style-type: none"><li>• Writing resolution: Option for a lower resolution for fast writing (between 2 and 10 <math>\mu\text{m}</math>)</li><li>• Exposure speed: 50X50 <math>\text{mm}^2</math> with 120 minute or better</li></ul> | Typical writing speed: 50 $\text{mm}^2$ per 180 minute or better at 1.5 $\mu\text{m}$ resolution. There should be option for fast writing at lower resolutions (typically between 2 and 10 micrometer).  |
|       | <b>Point 7</b><br>Automatic selection of different resolutions   | Removed  |
|       | <b>Point 8</b><br>Wavelength of illumination: compatible with SU8 and other photoresists (g, h & i line  | Wavelength of illumination: Most compatible with SU8 (365 nm OR 385 nm or very close and most suitable for SU8) and also for other photoresists (g, h & i line photoresists). The maximum thickness of SU8 is 100 $\mu\text{m}$ and the the equipment must be suitable for tha |

|  |   |  |
|--|---|--|
|  | photoresists).  |  |
|  | <b>Point 9</b><br><br>Light Source: LED or Laser  | Light Source: LED only   |
|  | <b>Point 10 - 13, 15</b><br><br><ul style="list-style-type: none"> <li>• Microscope for alignment: Two or more objectives (anywhere between 2X and 20X or better)</li> <li>• A suitable camera of should be there in the system for visualization</li> <li>• Microscope illumination: yellow light</li> <li>• Automatic changing between microscope magnifications via software.</li> <li>• Virtual mask aligner</li> </ul> | Removed  |
|  | <b>Point 16</b><br><br>A computer must be provided for using the software.  | A computer of following major specification. <ul style="list-style-type: none"> <li>- Processor: i7</li> <li>- RAM 16 GB or more</li> <li>- Monitor 21.5" FHD or better</li> <li>- Windows operating system</li> <li>- Other necessary accessories such as mouse, keyboard, cables etc.</li> </ul> |
|  | <b>Added a new point</b>  | The vendor must install the equipment at IISER Tirupati and demonstrate the fabrication of a structure shown below.<br><br>  |



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान तिरुपति

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH TIRUPATI**

Transit campus: C/o Sree Rama Engineering College Campus, Rami Reddy Nagar,  
Karakambadi Road, Mangalam (B.O), Tirupati - 517 507

**Website: [www.iisertirupati.ac.in](http://www.iisertirupati.ac.in)**

|  |  |   |
|--|--|---|
|  |  | <p>Figure 1: <b>During the time of installation</b>, vendor must demonstrate fabrication of this design on SU8. The design comprised of SU8 pillars arranged in a circular manner. Importantly the minimum separation between the pillars is 3 micrometers. The pillar height is 30 micrometers.</p>  |
|  | <p><b>Added Introduction for clarification</b></p> | <p>The equipment should be able to perform photolithography without a conventional physical mask. The purpose is to pattern photoresists (g, h &amp; i line) for fabricating microstructures and microfluidic channels. The fundamental nature of technology used in the equipment can be different. However, equipment should be able to expose and pattern photoresists coated on silicon wafers, which is our primary application. The vendors must show the capability of the equipment they quote by providing scientific or other relevant documents showing images and details of microstructures and micro-channels fabricated using their equipment. The basic technology of the equipment may vary, however, the equipment must fulfil our requirement.</p> |
|  |  |   |

All the Prospective Bidders are required to take cognizance of the proceedings of the document before submitting their bids as stipulated in the Bidding Documents.

The other terms & conditions of the notice issued on our IISER Tirupati website <http://www.iisertirupati.ac.in> will remain unchanged.

**Assistant Registrar (Admin & Purchase)**