

**Technical Evaluation of: Tender NO. NIT-40/2018-NC-000944-PHY-18-19
for UHV PLD Chamber**

UHV PLD Chamber	1
Spec	Excel Instruments
<p>Ultra High Vacuum System for Pulsed Laser Deposition</p> <p>i. SS 304, 14" dia ultra high vacuum ($< 8 \times 10^{-9}$ mbar) sustainable chamber (spherical shape), with load lock arrangements and required ports. Top flange CF150/CF200 for sample holder with up and down movement (25mm) and rotation. Bottom flange CF150 for target carrousel. CF 63 port at an angle for laser entry. Ports for vacuum gauges, gas inlet etc, view ports (CF 35). All joints with metal gasket. The chamber will be pumped by turbomolecular pump with Inlet flange: - DN 160 CF-F, Outlet flange: - DN 25 ISO-KF. Suitable pumps and gauges will be provided by the user.</p> <p>ii. 6-target carrousel capable of programmable positioning and rotation of selected targets, along with programmable controller.</p> <p>iii. Sample holder at 800 C with programmable PID controller and shutter (2" sample) with rotation and up and down movement by 25 mm.</p> <p>iv. Water chiller</p> <p>v. Beam delivery system comprising of 2 mirrors mounted on Kinematic mounts, lens mounted on XY and Z stage, laser window (metal to glass seal) with enclosure. Lens holder can move the lens X,Y and Z direction.</p> <p>vi. Intelligent window arrangement to minimise the laser window getting coated with deposit from target.</p> <p>vii. CF 150 SS gate valve with bellow sealed movement.</p> <p>viii. Water flow switch interlock for heater operation.</p> <p>ix. Loadlock chamber with magnetic transfer arm and isolation gate valve (CF 63) to chamber and pump. Suitable pumps and gauges will be provided.</p> <p>x. Required attachments for future RHEED up gradation.</p> <p>xi. Instrumentation rack.</p> <p>xii. High quality Baking tapes (1 set).</p> <p>xiii. Variacs and thermocouples and display for baking tapes (1 set).</p> <p>xiv. Any other necessary components.</p> <p>xv. The vendor must have supplied at least 10 similar systems in India (provide the list of customers).</p> <p>With free onsite comprehensive warranty on all components (including consumable items) for minimum of 12 months.</p>	Complied

Excel Instruments complies with all the technical specs for the above mentioned item. Therefore, they technically qualify for the financial bid opening.


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