**Booking Details**

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| https://lh7-rt.googleusercontent.com/docsz/AD_4nXc3uOgVW1S70ANH_Sbh5NPrbkD5IJ3rXOvVRVZnLmWILkXaNDPB0ksS47o9MOZPUWyc252HOVppsnS6ZkQ75K-VxH_-P6fKn_IgZ0Bqh-uwH_Y0u8mrsMGt2-c4grlkMORcEQ_Ay02jOFvYfdLpPu9KsU9hmXqDJgjwQh43wzZ1a08oMp4pWU8?key=2ndPAcLvR1_3cEQZcUu1Lg | **3D OPTICAL PROFILOMETER****Name of the equipment:** 3D OPTICAL PROFILOMETER**Make & Model:**ALICONAModel- Infinite Focus G5**I-Stem Registration ID-** **3224898****Category of Instrument**Characterization and Testing **Types of Analysis / Testing**Surface profile measurement **Application:** 1. Surface roughness measurement (2D and 3D)2. Area measurement after corrosion3. Thickness measurement4. Tool nose measurement and wear measurement**Description of Instrument**Capable of performing non-contact 3D surface roughness, micro geometry, form measurements, etc. Also, this instrument can generate, capture and display point cloud of high density, registered true colour information. |

**Contact Details**

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| **Book through I-STEM:** <https://www.istem.gov.in/>**Slot Booking Link**[I-STEM Slot Booking link for External User](https://www.istem.gov.in/equipment-info/24898/3D-Optical-Profilometer) | **Booking available for**Internal and External Both**Requisition form for** [Internals](https://randc.nitc.ac.in/pdf/instruments/med/20.%20Internal.pdf)[Externals](https://randc.nitc.ac.in/pdf/instruments/med/20.%20External.pdf) |

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| **Faculty In-charge:** Dr. Basil Kuriachen**Email ID:**bk@nitc.ac.in**Phone number:** +91-9947187133 | **Technical Staff:** Harikrishnan K (TE) harikrishnank@nitc.ac.in SHIBIN (ST) shibinr@nitc.ac.inSASI KK (TA)kksasi@nitc.ac.in  | **Department**MED**Office Email ID**medoffice@nitc.ac.in**Location**FIST LAB, CAD/CAM CENTRE, Department of Mechanical Engineering**Lab Phone No**0495 228 6476 |

**Features, Working Principle and Specifications**

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| --- | --- |
| **Features of the equipment*** High-Resolution 3D Surface Measurement
* Non-Contact Measurement
* Versatility in Sample Types
* Form and Roughness Evaluation
* Advanced Software Capabilities
 | **Unique features/Measurement capabilities, if any*** Focus Variation Technology
* Automatic Stitching

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| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**

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| --- | --- |
| * **Travel range in XY**
 | 100 mm X 100 mm motorized  |

* **Travel range in Z** -100 mm motorized

|  |  |
| --- | --- |
| * **6 Objectives**
 |  2.5X, 5X, 10X, 20X, 50X, 100X  |

* **Min measurable radii** 1 μm
* **Finest lateral resolution** 0.44 μm for 100x objective 3D rotation unit for capturing 3D data points
 | **Measurement/Sample specifications:** * Metallic/composite/alloys etc.,
* Maximum size usually limited 100mm x 100mmx100mm
 |

**Type of Sample Required for Analysis / Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions**

|  |
| --- |
| * Quantity: Maximum size usually limited 100mm x 100mmx100mm
* Sample Type: Metallic/composite/alloys etc.,
* Maximum No. of Samples Accepted at a Time- 2
* Minimum No of Days Required for Analysis – 1
 |

**User Charges Rs. (GST Extra)**

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| **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** |
| 250/- per scan | 500+ 18%GSTPer scan | 500+ 18%GSTPer scan | 500+ 18%GSTPer scan  |