



**MEMS & Microelectronics Lab**  
**Centre for NEMS and Nanophotonics**  
**Electrical Engineering Department, IIT Madras, Chennai – 600 036**  
**Equipment Usage Charges w.e.f 01/09/2018**

<b>Process Equipments*</b>			
<b>Equipment Name</b>	<b>Process</b>	<b>Conditions</b>	<b>Industrial User (INR)</b>
DC Sputtering	Deposition of Metals	For Single Run	10000
Dicing (ADT)	Automatic Dicing	Per Hour	10000
Dicing (Ultratech)	Manual Dicing	Per Hour	6000
DRIE	Bosch	For Single Run	20000
DRIE	Cryogenic	For Single Run	40000
E-Beam Evaporation	Chrome, Gold	For Single Run	10000
E-Beam Litho(Raith)	For writing sub-micron feature size	Per Hour	8000
Heraeus (Furnaces)	Diffusion	For Single Run	10000
Tempress/Thermco (Furnaces)	Dry and wet Oxidation	For Single Run Industrial User (INR/hr)*	10000
SVCS (Furnaces)	Oxidation and Diffusion	For Single Run	12000
ICP PECVD	Silicon Dioxide, Silicon Nitride Amorphous Silicon	For Single Run	20000
ICP-RIE (CL2 & BCL3)	Dry etch	For Single Run	16000
ICP-RIE (CL2 & HBr)	Dry etch	For Single Run	16000
Constant Temp Bath	Wet etch	Per Hour	4000
LPCVD	Silicon Nitride, Polysilicon Silicon Dioxide	For Single Run	24000
Mask Aligner (MA6/BA6)	Photolithography	For Single exposure	8000
Mask Aligner(OAI)	Photolithography	For Single exposure	6000
Mask Aligner(Deep UV)	Photolithography	For Single exposure	10000
Mask Writer	Photo masking	For 1 square inch 1um resolution	40000
Mask Writer	Photo masking	For 1 square inch 2 um resolution	20000
Polishing (Ultratech)	Polishing	For Single Run	6000
RF Sputtering	Reactive Sputtering	For Single Run	12000

RIE	Dry etch	Per Hour	8000
RTP (Anneal Sys)	Oxidation and Annealing	Per Hour	10000
Substrate Bonder	Wafer Bonding	For Single Run	20000
Thermal Evaporation	Aluminium	For Single Run	6000
Wet Bench	Silicon Dioxide Etch, Aluminium Etch, Wafer Cleaning	Per Hour	4000
Wire and Die Bonder	Wire bonding	Per Hour	8000

<b>Characterization Equipments</b>			
3D Non Contact Profilometer	Surface Imaging	Max. 10 meas. per hour. 50% discount for additional measurements.	4000
Confocal Microscope	Surface Imaging	Max. 10 meas. per hour. 50% discount for additional measurements.	4000
Spectroscopic Ellipsometer	Thickness/ Refractive index measurement	Max. 5 meas. per hour. 25% discount for additional measurements.	4000
Table top SEM	Surface Imaging	Max. 5 meas. per hour. 25% discount for additional measurements.	4000
Micro system Analyser	Vibration and surface Topography	Per Hour	4000
Cantisense		Per Hour	6000
Four Probe kit	Resistivity Measurement	Per Hour	4000
Probe Station(Manual)	DC Probe Station, Parametric Analyzer, Impedence Analyzer, RF Probe Station, Vector Network Analyzer	Max. 5 meas. per hour. 25% discount for additional measurements.	4000
Probe Station(Thermal) (-60 to +200 deg C)	DC Probe Station, Parametric Analyzer, Impedence Analyzer, RF Probe Station, Vector Network Analyzer	Max. 5 meas. per hour. 25% discount for additional measurements.	8000

Probe Station(Vacuum) (-60 to +200 deg C)	Parametric Analyzer, Impedence Analyzer, Vector Network Analyzer	Max. 5 meas. per hour. 25% discount for additional measurements.	8000
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<b>Organic Lab Equipments*</b>			
Solar Simulator	Charaterization	Per hour	4000
IPCE	Charaterization	Per hour	4000
Thermal Evaporation	Aluminium,Gold,Silver, LiF and MoO3	For Single Run	4000
Glove Box	Fabrication process	Per hour	5000
Glove Box	UV Ozone cleaning	Per Hour	2000
Glove Box	Spinner	Per Hour	2000
Glove Box	Prebake and Post bake	Per Hour	2000

- **For External Academics/ Research park firms /Startups/Industries -GST 18% will be added and cheque must be paid towards "The Registrar, IIT Madras".**
- **\* For all Processing Equipments and Organic Lab Equipments, cost of consumables will be charged additionally at actuals.**
- **External Academics/Startups/IITM Research Park Firms – 50% discount**
- **IITM Users – 75% discount**