

# MVD100E Overview

Molecular Vapor Deposition (MVD®) Films and Systems that can make a significant improvement to your products and results

## MVD® Applications

- MEMS microphones
- Ink jet print heads
- Optical sensors
- Bond pad protection
- Accelerometers
- Microarrays
- LED applications
- Gyroscopes
- Enhanced Stabilization Sensors
- Bio-chips / Labs on a chip
- Solar cells
- Nano imprint lithography
- Microfluidic applications
- Hearing aids
- Micromirror Arrays
- Intraocular implants
- Glass slides
- Pressure sensors

## MVD® film types

- Antistiction
- Hydrophobic / Hydrophilic
- Release layers
- Adhesion layers
- Oleophobic / Oleophilic
- Self healing
- Lubricant
- Low temperature oxides
- Corrosion resistant
- Moisture barrier
- Bio-compatible / Bio-reactive
- Functionalized layers
- Conformal / 2000:1 aspect ratio

## MVD® Substrates

- Wafers & Dies
- Packaged Parts
- Small assemblies
- Glass Slides
- Plastic Sheets
- Microfluidic components
- Plastic parts

## MVD® Advantages

- Demonstrated large yield increase
- Excellent production repeatability
- Process control through automation
- Demonstrated product enablement

## Chamber Accommodates

|   |              |
|---|--------------|
| 6" or 8" Cassettes  | PMMA         |
| Metals  | PDMS         |
| Glass   | Oxides       |
| Acrylics  | SU-8         |
| Polycarbonates  | Polystyrene  |
| Polypropylene   | Photoresists |
| Chamber dimensions up to<br>11.10" L x 12.40" W x 3.25" D |              |

## MVD® System Capabilities

- Vacuum based vapor deposition processes:
- SAM (Self Assembled Monolayer) films
  - CVD type films
  - ALD type films
  - Multi-Layer nanolaminates deposited in-situ
  - One system supports many film options
  - Process temperatures from 35°C-100°C