Overview
LPCVD of standard (stoichiometric) and low-stress silicon nitride. Depositions require ~4 hours of overhead (in addition to deposition time) for temperature ramping and pump/purge cycles. The tool accommodates full 100 mm or 150 mm wafers. Substrates are limited to cleaned Si or quartz/fused silica substrates, bare or coated with PECVD or thermal oxide. **No metals are allowed.**

<table>
<thead>
<tr>
<th>LMACS Name</th>
<th>LPCVD Nitride Deposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Area</td>
<td>DEPOSITION</td>
</tr>
<tr>
<td>Model</td>
<td>Tytan Mini Series</td>
</tr>
<tr>
<td>Vendor</td>
<td>Tystar</td>
</tr>
<tr>
<td>Team</td>
<td>Aaron Hryciw Aditi Ganji Michael Hume Glenn Elaschuk</td>
</tr>
</tbody>
</table>

Process Gasses

<table>
<thead>
<tr>
<th>Process Gas</th>
<th>Max Flow (MFC Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCS</td>
<td>300 sccm</td>
</tr>
<tr>
<td>NH₃</td>
<td>200 sccm</td>
</tr>
<tr>
<td>N₂ BKFL</td>
<td>5000 sccm</td>
</tr>
<tr>
<td>N₂ VAC</td>
<td>1000 sccm</td>
</tr>
</tbody>
</table>

Temperature Range

<table>
<thead>
<tr>
<th>Zone</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500 °C</td>
<td>850 °C</td>
</tr>
<tr>
<td>2</td>
<td>500 °C</td>
<td>850 °C</td>
</tr>
<tr>
<td>3</td>
<td>500 °C</td>
<td>850 °C</td>
</tr>
</tbody>
</table>

Documents

<table>
<thead>
<tr>
<th>Operating Procedure</th>
<th>Tystar LPCVD SOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Assessment</td>
<td></td>
</tr>
</tbody>
</table>

Related Documents
- Tystar LPCVD - Tube 2 (Nitride) (Equipment)
  - equipment
  - tystar
  - lpcvd
  - nitride
  - tube2
  - deposition

- LPCVD nitride process information (Equipment)
  - tystar
  - lpcvd
  - nitride

- Tystar Furnaces (Equipment)
  - tystar
  - lpcvd
  - tube4

- Tystar LPCVD - Tube 4 (doped Poly Si) (Equipment)
  - equipment
  - tystar
  - lpcvd
  - tube4
  - deposition

- Tystar LPCVD - Tube 3 (Poly Si) (Equipment)
  - equipment
  - tystar
  - lpcvd
  - tube3
  - deposition

- HowTo Put the LPCVD into a Safe State after a failure (Equipment)
  - lpcvd
  - equipment
  - sop
  - tube4
  - tube3
  - tystar
  - tube2

- LPCVD Tube 4 Process Record (Equipment)
  - tube4
  - lpcvd
  - forms
  - deposition

- LPCVD Tube 4 Process Record - Results (Equipment)
  - tube4
  - lpcvd
  - forms
  - process
  - deposition