**Durimide® 7500**
Photosensitive Polyimide Precursor

- Designed with a unique structure and sensitizer that gives it the following characteristics:
  - Fast photospeed
  - Enhanced resolution
  - Wide process latitude
  - Self priming
  - Excellent adhesion

- Superior mechanical property retention after extended pressure cooker test (> 1000 hour)

- Cured film thickness range: 2-50µm

<table>
<thead>
<tr>
<th>Type</th>
<th>Viscosity</th>
<th>Cured Film Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durimide® 7505</td>
<td>1200CS</td>
<td>2-5µm</td>
</tr>
<tr>
<td>Durimide® 7510</td>
<td>3300CS</td>
<td>4-15µm</td>
</tr>
<tr>
<td>Durimide® 7520</td>
<td>6400CS</td>
<td>11-25+µm</td>
</tr>
</tbody>
</table>

**Compatible Ancillary Products:**

- **Developer/Rinse Combinations:**
  - QZ3501/QZ3512
  - HTRD2/RER600

- **Back Side Rinse:**
  - QZ3501
  - HTRD2

- **Edge Bead Remover:**
  - HTRD2

- **Stripper Products:**
  - N-Methyl 2-Pyrrolidone
  - QZ 3322

**Cured Film Properties of Durimide® 7500 Series**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>MPa</td>
</tr>
<tr>
<td>Young’s Modulus</td>
<td>GPa</td>
</tr>
<tr>
<td>Tensile Elongation</td>
<td>%</td>
</tr>
<tr>
<td>Glass Transition Temperature</td>
<td>°C</td>
</tr>
<tr>
<td>Thermal Decomposition Temperature</td>
<td>°C</td>
</tr>
<tr>
<td>Coefficient of Thermal Expansion</td>
<td>ppm/°C</td>
</tr>
<tr>
<td>Dielectric Constant</td>
<td></td>
</tr>
<tr>
<td>Moisture Absorption@50% RH</td>
<td>%</td>
</tr>
</tbody>
</table>
Process Window

Exp.Range 60-200mJ/cm²
Focus Range 4-8 microns into film
Substrate: Silicon
Soft Bake: 100°C /3mins
PI Thickness: 12µm
Exposure Tool: Canon i-line stepper
0.6NA , 0.5 sigma
Post Exposure delay: 20-22°C/ 30 mins
Developer/Rinse: HTRD2/RER600
30°/10°/15°
Cure: 350°C/ 60 mins
Cured Film Thickness: 6.2 µm

Process Window for a 7 & 15 µm CD space in a 12 µm film

Process Summary:
Substrate: silicon
Soft Bake: 100°C /3mins
PI Thickness: 10µm
Exposure Tool: Canon g-line stepper
.43NA
Post Exposure delay: 20-22°C/ 30 mins
Developer/Rinse: HTRD2/RER600
30°/10°/15°

Cured Film Thickness vs. Spin Speed

Durimide® 7500 undergoes a 45% shrinkage from softbake to cure.