Porous Chuck

- Monolithic structure of porous and retainer
  NTK Ceratec developed unique technique manufacturing monolithic structure of porous ceramic and retaining body. This enables ultimate bonding strength between porous ceramics and retaining body and more than mechanical strength of porous ceramics.

- Various available option
  The following material, pore size and porosity are available.
  - Material: Al₂O₃, SiC
  - Pore size: 5, 10, 30, 70μm
  - Porosity: 30~60%

- Design flexible
  Both square and circle design are available. Any inside tunnel pattern is available.

**【Characteristics】**

<table>
<thead>
<tr>
<th>Material</th>
<th>Al₂O₃ Retainer</th>
<th>Porous</th>
<th>SiC Retainer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity</td>
<td>2.5</td>
<td>3.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Bending Strength ( MPa )</td>
<td>50</td>
<td>450</td>
<td>50</td>
</tr>
<tr>
<td>Young’s modulus ( GPa )</td>
<td>55</td>
<td>380</td>
<td>55</td>
</tr>
<tr>
<td>CTE ( ℃ )</td>
<td>7.4 x 10⁻⁶</td>
<td>7.3 x 10⁻⁶</td>
<td>4.7 x 10⁻⁶</td>
</tr>
<tr>
<td>Thermal Conductivity ( W / m·K )</td>
<td>—</td>
<td>30</td>
<td>—</td>
</tr>
<tr>
<td>Volume Resistivity ( Ω·cm )</td>
<td>10¹⁵</td>
<td>&gt; 10¹⁵</td>
<td>10⁶</td>
</tr>
</tbody>
</table>

**【Application】**

- Fixture of grinding Si Wafer
  ( Dicing saw, Grinder, Polisher )
- Glass substrate carrier for LCD
- Fixture for various test equipment
- Fixing film sheet or metal substrate

**【Example】**

- Fixing film sheet or metal substrate
- Bonding strength between porous ceramics and retaining body is more than mechanical strength of porous ceramics.

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This product specification and the catalog value are the references, and we may change of it without notice.

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