Overview

Entegris has combined more than 40 years of experience in handling critical substrates with user input to create the solar cell wet process carrier. Used in etch, cleaning and texturing applications, our 50- and 100-capacity carriers offer cleaner batch processes with fewer cell defects.

Improve your minority carrier lifetime with a high-performance process carrier. A proprietary tooth design prevents residual fluid from gathering in between the cell and tooth providing you with reduced marks and defects. In addition, a patented molding process encapsulates the stainless steel wafer support rods preventing metal contaminants in your processes. Built for strength and durability, the wafer support rod offers you longer process carrier life.

Features and Benefits

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary tooth design minimizes fluid traps</td>
<td>Improved process throughput and yield</td>
</tr>
<tr>
<td>Patented overmolding technique covers all stainless steel, leaving no external exposure</td>
<td>Cleaner process baths improve cell yield and minority carrier lifetime</td>
</tr>
<tr>
<td>PVDF base polymer offers excellent resistance to bath chemicals</td>
<td>Long-lasting carrier life</td>
</tr>
<tr>
<td>Carbon fiber filler in PVDF minimizes thermal expansion</td>
<td>Improved equipment interoperability through carrier’s dimensional stability</td>
</tr>
<tr>
<td>Custom machined end walls fit wide variety of equipment requirements</td>
<td>Compatible with multiple automated machines</td>
</tr>
<tr>
<td>Optional retaining bar stabilizes cells within the carrier</td>
<td>Improved process control</td>
</tr>
</tbody>
</table>

Performance Testing

Over a nine month period, Entegris has worked closely with a key solar cell manufacturer to test various aspects of the wet process carrier design. A proprietary tooth profile was developed through continuous improvement testing on R&D and production wet benches. Additional product testing was conducted “down stream” of the wet process to verify dimensional integrity of cell locations, carrier interface points and RFID readability. These tests included compatibility testing in diffusion furnaces, stack splitters and ion implant tools.

Specifications

<table>
<thead>
<tr>
<th>Materials of construction:</th>
<th>End wall</th>
<th>PVDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wafer supports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon fiber-filled PVDF, stainless steel core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation:</td>
<td>Horizontal or vertical</td>
<td></td>
</tr>
<tr>
<td>Maximum temperature:</td>
<td>80°C (176°F)</td>
<td></td>
</tr>
<tr>
<td>Patent:</td>
<td>Pending</td>
<td></td>
</tr>
</tbody>
</table>
### Dimensions

#### 50–capacity Carrier

- **TOP VIEW**
  - Width: 197.0 mm (7.76")
  - Length: 274.0 mm (10.78")
  - Height: 186.5 mm (7.34")

- **FRONT VIEW**
  - Pitch (center to center of tooth): 4.76 mm (0.187")

- **SIDE VIEW**
  - Weight: Without cells – 2.10 kg (4.63 lb)

- **Ordering Information**
  - Part Number: WPC156-ST105-1
    - Description: 156 mm wet process carrier, 50-capacity

- **100–capacity Carrier**

- **TOP VIEW**
  - Width: 206.0 mm (8.11")
  - Length: 554.0 mm (21.81")

- **FRONT VIEW**
  - Height: 206.0 mm (8.11")

- **SIDE VIEW**
  - Weight: Without cells – 4.15 kg (9.15 lb)

- **Ordering Information**
  - Part Number: WPC156-ST110-1
    - Description: 156 mm wet process carrier, 100-capacity without retaining rod

  - Part Number: WPC156-ST110-3
    - Description: 156 mm wet process carrier, 100-capacity with retaining rod

#### Additional Information

- End walls can be customized to fit virtually all equipment configurations.

### Ordering Information

- **Part Number**
  - WPC156-ST105-1: 156 mm wet process carrier, 50-capacity
  - WPC156-ST110-1: 156 mm wet process carrier, 100-capacity without retaining rod
  - WPC156-ST110-3: 156 mm wet process carrier, 100-capacity with retaining rod

### For More Information

Contact us at solar@entegris.com or visit www.PVProcessSolutions.com to discover how to improve yields, increase efficiencies and reduce your costs.

### Terms and Conditions of Sale

All purchases are subject to Entegris’ Terms and Conditions of Sale. To view and print this information, visit www.entegris.com and select the Legal Notices link from the footer.

Entegris® and the Entegris Ring Design® are registered trademarks of Entegris, Inc.