HPR 500 Positive Resist Series

**g-line Performance**

- The HPR 500 Novolac-based positive photoresist family is designed for typical broadband and g-line processes.
- HPR 500 Series resists perform with a wide range of developer conditions; normalities, MIC or MIF, immersion or track application, with or without surfactant.
- HPR 500 Series resists are available in several viscosities providing a range of film thicknesses from 1 µm to 4 µm.
- Edge Bead Removal can be successfully achieved using FUJIFILM’s RER Series Products.
- HPR 500 Series resists have excellent adhesion properties.

**Product Features**

- Wide process latitude.
- Excellent coating characteristics.
- Thermal stability >125° C.
- Compatible with O₂ Plasma stripping and Fujifilm’s Microstrip Products.

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**Resolution at 160mJ/cm²**

<table>
<thead>
<tr>
<th>Resist Thickness</th>
<th>Focus Latitude for 2 µm l/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5 µm l/s</td>
<td>F: -2.1 µm</td>
</tr>
<tr>
<td>2.0 µm l/s</td>
<td>F: 1.4 µm</td>
</tr>
<tr>
<td>1.7 µm l/s</td>
<td>F: -0.7 µm</td>
</tr>
<tr>
<td>1.5 µm l/s</td>
<td>F: 0.0 µm</td>
</tr>
<tr>
<td>E1:1 @ 2.0µm l/s</td>
<td>F: 0.7 µm</td>
</tr>
<tr>
<td></td>
<td>F: 1.4 µm</td>
</tr>
<tr>
<td></td>
<td>F: 2.1 µm</td>
</tr>
</tbody>
</table>

**Substrate:** Silicon  
**Resist Thickness:** 1.85 µm  
**Soft Bake:** 110° C / 60 sec  
**Exposure Tool:** Canon FPA-1550 MII g-line stepper  
**Developer:** HPRD 429 5 sec/7sec Double Puddle
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Please refer to the material safety data sheet (MSDS) for complete information on storage and handling, toxicological properties, personal protective equipment, first aid, spill and leak procedures, and waste disposal. To order an MSDS, call your FFEM sales office. Before using or handling this product, review the MSDS information thoroughly.

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**CD:** 2.0µm L/S  
**$E_{11}$:** 160 mJ/cm²  
**Substrate:** Silicon (HMDS primed)  
**Resist Thickness:** 1.85 µm  
**Soft Bake:** 110°C/60"  
**Exposure Tool:** Canon FPA-1550MII (g-line)  
**Developer:** HPRD 429, 5 sec/7 sec Double Puddle

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**Thermal Stability**

- **No Bake**
- **120°C HB**
- **125°C HB**

**Exposure:** 180mJ  
**Substrate:** Silicon  
**Thickness:** 1.1410µm  
**SoftbAKE:** 90°C/60"  
**PEB:** 115°C/60"  
**Developer:** HPRD-428  
**Dev. Time:** 14"/40" Double Puddle

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**Film Thickness versus Spin Speed**

- **HPR 504**
- **HPR 506**

**Exposure:** 180mJ  
**Substrate:** Silicon  
**Thickness:** 1.1410µm  
**Softbake:** 90°C/60"  
**PEB:** 115°C/60"  
**Developer:** HPRD-428  
**Dev. Time:** 14"/40" Double Puddle

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