
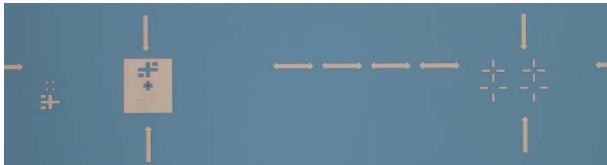


Process flow title AZ nLOF 2020 on SiO₂			Revision 1.1
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Objective

Batch name: Litho TPT alignment

This process flows is a guideline on how to prime, spin coat, expose, develop, and inspect 2 μm AZ MiR 701 on oxidized Si substrates using Spin Coater: Gamma UV, Aligner: MA6-2 / KS Aligner, and Developer: TMAH UV-lithography.

Step Header	Equipment	Comments
1 Spin coating of AZ nLOF 2020 with HMDS priming		
1.1 Coat wafers	Spin Coater: Gamma UV	<p>Resist: AZ nLOF 2020 (Resist 2)</p> <p>HMDS priming: 15 s @ 120°C (contact angle ~70°)</p> <p>Spin: 30 s @ 3300 rpm (~2 μm)</p> <p>Softbake: 60 s @ 110 °C</p> <p>Sequence: (2421) DCH 100mm nLOF 2020 2um HMDS</p> <p>Substrates: Processed Si with GreenBelt N+ and GreenBelt CONTACTS layers. The surface is etched SiO₂ (~90 nm).</p>
2 UV Exposure		
2.1 Exposure	Aligner: MA6 – 2 or KS Aligner	<p>Mask: GreenBelt METAL</p> <p>Exposure mode: Hard contact</p> <p>HC wait time: 10 s</p> <p>Alignment gap: 20 μm</p> <p>Exposure dose: 112 mJ/cm² for MA6 – 2 98 mJ/cm² for KS</p> <p>Alignment marks: X=±43mm; Y=0mm</p> <p>mask:</p>  <p>substrate:</p>  <p>Exposure time: 8.6s @ 13mW/cm² for MA6-2 14s @ 7mW/cm² for KS</p>
3 Development with PEB		
3.1 Develop	Developer: TMAH UV-lithography	<p>Post Exposure Bake: 60 s @ 110°C</p> <p>Development in AZ 726 MIF: single puddle, 60 s</p> <p>Sequence: (3001) DCH 100mm PEB60s@110C+SP60s</p> <p>PEB and development is done sequentially</p>
4 Inspection		
4.1 Inspection	Optical microscope	<p>Inspect: Verniers (X and Y) for alignment accuracy (possible also monitor structures for resolution)</p> 