|  |
| --- |
| Objective |
| Batch name: Process template |
| This process flows is a guideline on how to spin coat, expose, and develop AZ MiR 701 on 4” substrates such as Si, SiO2 and Borofloat, using automatic spin coater, mask aligner and automatic developer. |

|  |  |  |  |
| --- | --- | --- | --- |
| Step Heading | Equipment |  | Comments |
| 1. Pretreatment and spin coat of AZ MiR 701
 |  |
| * 1. Pretreatment
 | BHF dip*or*Oven: HMDS – 2 | BHF dip for Si substrates (30 s, H2O 5 min)HMDS treatment for Si, SiO2, and Borofloat**Recipe:** 01 | For Si, choose BHF or HMDS.HMDS priming can also be performed on Gamma spin coaters. |
| 1. Spin coat of AZ MiR 701
 |  |
| * 1. Coat wafers
 | Spin Coater: Gamma UVorSpin Coater: Gamma e-beam & UV | **Resist:** AZ 5214E (line 1 or CO2 line 2)**Spin:** 30 s @ 4600 rpm (for 1.5µm)**Softbake:** 60 s @ 90 °C**Sequence:**(1410) DCH 100mm MiR 701 1.5um or(4210) DCH 100mm MiR 701 1.5um | Use (1411) or (4211) for in-line HMDS priming.Resist thickness can be measured on FilmTek  |
| 1. UV Exposure
 |  |
| * 1. Exposure
 | KS AlignerorAligner: MA6 – 2  | **Mask:** your mask**Exposure mode:** Soft contact**Exposure dose:**170 mJ/cm2 **Exposure time:**21.3 s @ 8 mW/cm2 for KS15.5 s @ 11 mW/cm2 for MA6 – 2 | Information on exposure dose for other thickness or aligner: http://labadviser.danchip.dtu.dk/index.php/Specific\_Process\_Knowledge/Lithography/UVExposure\_Dose |
| 1. Post Exposure Bake
 |  |
| * 1. Post Exposure Bake
 | Developer: TMAH UV-lithography | **Post Exposure Bake:** 60 s @ 110 °C**Sequence:** (2001) DCH PEB 110C 60s or(3001) DCH 100mm PEB60s@110C+SP60s | PEB and development is typically done simultaneously |
| 1. Development
 |  |
| * 1. Development
 | Developer: TMAH UV-lithography | **Development in TMAH (AZ 726 MIF):** single puddle, 60 s**Sequences:**(1002) DCH 100mm SP 60s or(3001) DCH 100mm PEB60s@110C+SP60s | PEB and development is typically done simultaneously |
| 1. Inspection
 |  |
| * 1. Inspection
 | Optical microscope | Inspect pattern / alignment mark / process monitor |  |