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| Objective |
| Batch name: Process template |
| This process flow is a guideline on how to spin coat, expose, and develop resist (e.g. AZ 5214E) on a chip mounted on a 4” Si carrier wafer, using automatic spin coater, maskless aligner, and automatic developer. |

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| Step Heading | Equipment |  | Comments |
| 1. Pretreatment
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| * 1. Surface treatment
 | Oven: HMDS – 2 | HMDS treatment for Si, SiO2, and Borofloat**Recipe:** 01 | OBS: HMDS priming can NOT be performed on Gamma spin coaters. |
| 1. Mounting on carrier
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| * 1. Bond chip
 | Hotplate | Use CrystalbondChip must be in the center of the carrier wafer |  |
| 1. Spin coat of AZ 5214E
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| * 1. Coat wafers
 | Spin Coater: Gamma UVorSpin Coater: Gamma e-beam & UV | **Resist:** AZ 5214E (line 3 or CO2 line 1)**Spin:** 30 s @ 4500 rpm (for 1.5µm)**Softbake:** 60 s @ 90 °C**Sequence:**(3410) DCH 100mm AZ5214E 1.5um or(4110) DCH 100mm AZ5214E 1.5um | Resist thickness can be measured on FilmTek |
| 1. Exposure
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| * 1. Expose
 | Aligner: Maskless 01orAligner: Maskless 02 | **Design:** your design file**Exposure dose:**70 mJ/cm2 for MLA165 mJ/cm2 for MLA2**Defocus:**0 for MLA12 for MLA2 | Information on exposure dose for other thickness, aligner, or developer: http://labadviser.danchip.dtu.dk/index.php/Specific\_Process\_Knowledge/Lithography/UVExposure\_Dose |
| 1. Development
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| * 1. Develop
 | Developer: TMAH UV-lithography | **Development in TMAH (AZ 726 MIF):** single puddle, 60 s**Sequence:**(1002) DCH 100mm SP 60s | Consider long PEB if different resist is used (e.g. 2min @ 110°C for nLOF or MiR) |
| 1. Inspection
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| * 1. Inspection
 | Optical microscope | Inspect pattern / alignment mark / process monitor |  |
| 1. Unmounting
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| * 1. De-bond chip
 | Hotplate | Remove chip from carrier and clean before continuing processing |  |