Shipley 1800 Series Photoresist

General purpose broad band (365 nm - 436 nm) resist, best suited for use on the GCA 6300 g-line 5x stepper and contact aligners.

Available as S1805, S1813, S1818, S1818J (dyed), S1827 (0.5, 1.3, 1.8, 2.7 µm).

1.a. (Optional) Dehydration bake at 150°C for 30 minutes.

1.b. Liquid prime with P-20 (20% HMDS) primer. Apply primer over entire wafer, allow to remain for 10 seconds, then spin dry (3000-5000 RPM, 30 sec.)

-or-

1. Vapor prime wafer with YES Oven HMDS process.

2. Dispense photoresist in middle of wafer. Spin immediately at desired speed, 20 - 30 seconds (thicker films take a longer time to reach uniformity). You may wish to ramp up to the desired speed for better coverage over topography.

3. Solvent removal bake at 90°C - 115°C for 1 - 2 minutes on the hot plate or 20 - 30 minutes in the oven. Thicker films benefit from longer baking.

4. Expose. Time will vary depending on resist thickness, bake time, substrate reflectivity, intermediate film thickness, etc. See Sample Processes page for approximate exposure times.

5. **Manual develop**: 1 minute in AZ 300MIF or CD 26. Can also use MF-321 (no dilution) **USE AGITATION AT END OF DEVELOPMENT TO REMOVE RESIDUES**.

**Automatic develop**: Hamatech wafer processor, AZ 300 MIF, 1 minute, single puddle. Use 1 minute double puddle for thicker films.
6. (Optional) Hard bake at 115°C for 1 minute on the hot plate, or 20 - 30 minutes in the oven. The hard bake serves to promote adhesion during wet etching or increase selectivity during dry etching.