

CNF Contact Aligners

Instrument	Resist	Prebake	Exposure Time, PEB	Development
HTG - AB-M / EV620	S1805	115°C, 45 sec.	0.9/1.6	300MIF, 60 sec.
HTG - AB-M / EV620	S1813	115°C, 60 sec.	1.4/2.5	300MIF, 60 sec.
HTG - AB-M / EV620	S1818	115°C, 60 sec.	1.8/3.2	300MIF, 60 sec.
HTG - AB-M / EV620	S1827	115°C, 90 sec.	2.8/5.2	300MIF, 60 sec.
HTG - AB-M / EV620	AZ P4903	115°C, 90 - 180 sec.	(wait 45 min.) 15/30	AZ 421K, 3 min.

Note: all exposure times are approximate. Your process may be 0.5 - 2x these values or more.

The Contact Aligners use 405-365nm broadband illumination. These resists are specified as g-line or broadband, but i-line resists can be used as well. Output of the HTG or AB-M is measured as $\sim 20\text{mW/cm}^2$ @405nm, and $\sim 10\text{mW/cm}^2$ @365nm. Post exposure bake (PEB) is not required for these processes.

Image reversal: expose as usual, run YES oven NH₃ process, flood expose 60 sec. using HTG, develop 60 sec. in MF321. Thicker films may require 300MIF or longer develop times.

Image reversal for 1800 series resists requires 4-5X normal dose; this can be characterized by exposing test doses and developing (without NH₃ baking) in MF321 for 60 sec. The best dose for this process will be very close to the correct reversal dose. The reversal dose should still be fully characterized in the usual way. Be sure to measure the resist thickness after development to make certain that full height is retained. Underexposure will result in thinner resist with poor sidewall profile.