



UVN™30 Negative DUV Photoresist

Advanced Negative Resist for Sub-180 nm Lines/spaces and Active Area Applications

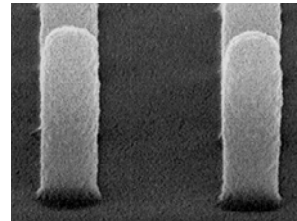
Description

UVN30 is a negative-tone photoresist for DUV, X-ray and e-beam applications. This resist is targeted for fast throughput device production rules down to 150 nm. Nested lines/spaces, isolated lines, posts and contacts can be resolved with wide process windows. Minimal PEB sensitivity, insensitivity to airborne contaminants, and superior metal etch resistance are only some of the properties UVN30 resist offers.

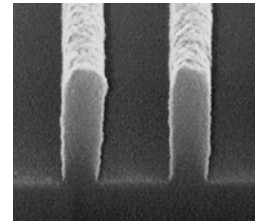
Features Include:

- Focus latitude of 0.8 μm for 180 nm 1:1 and 1:2 lines/spaces and isolated lines
- 130 nm ultimate resolution for 1:2 features
- High throughput (<25 mJ/cm²)
- PEB sensitivity $\leq 1 \text{ nm}/^\circ\text{C}$
- Wide process window for 250 nm 1:2 posts

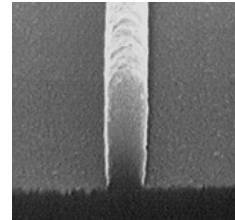
Lithographic Performance



250 nm, 1:2 posts



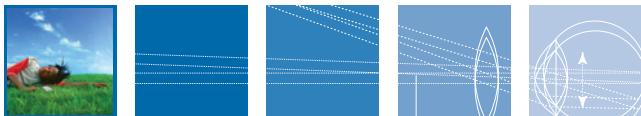
150 nm, 1:2 Lines/Spaces



150 nm, 1:2 Isolated Lines

Recommended Process Conditions

	Reflective Substrates	Non-reflective Substrates
Thickness	5,000–8,000Å	5,000–8,000Å
Softbake	90°C/60 sec. Proximity Hotplate	110°C/60 sec. Proximity Hotplate
PEB	95°C/60 sec. Proximity Hotplate	105°C/60 sec. Proximity Hotplate
Developer	MEGAPOSIT™ MF™ CD-26 @ 21°C, 30 sec. single puddle	MEGAPOSIT MF CD-26 @ 21°C, 30 sec. single puddle

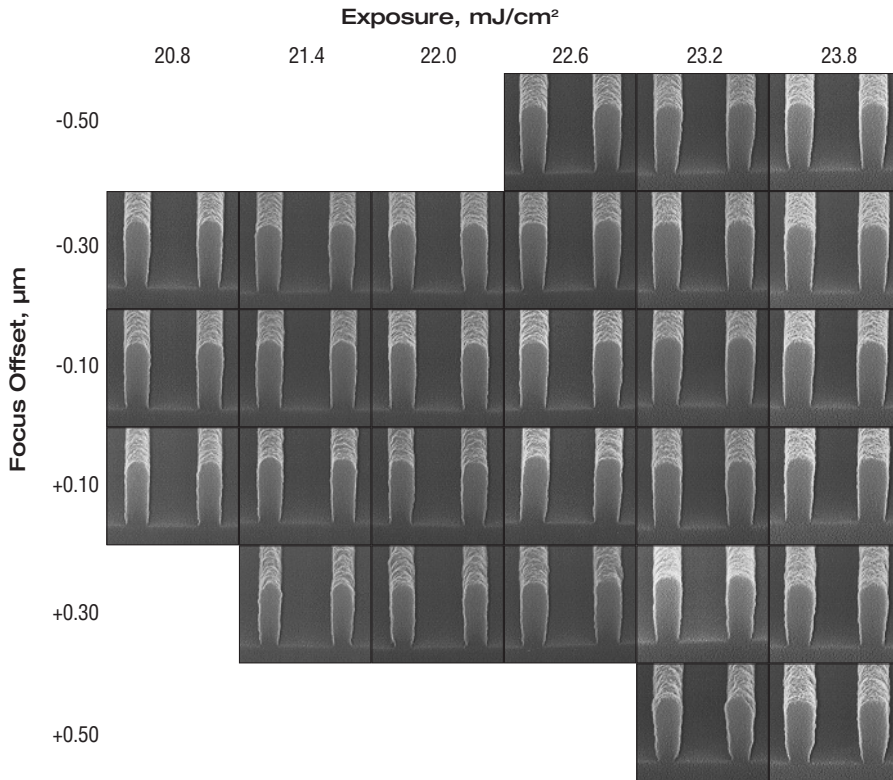


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UVN30 Negative DUV Photoresist

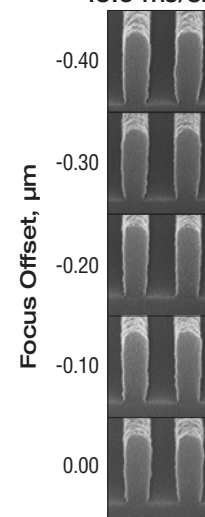
Versatility

180 nm 1:2 Lines/Spaces on SiON, Process Window*

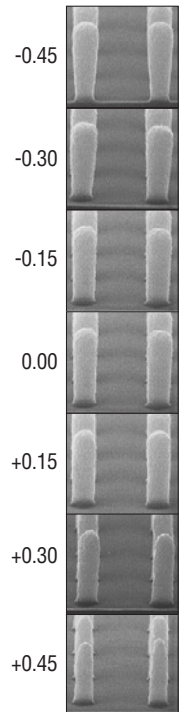


*ASML 5500/300 Stepper

Focus Latitude
180 nm 1:1 Lines/Spaces on SiON*
19.0 mJ/cm²



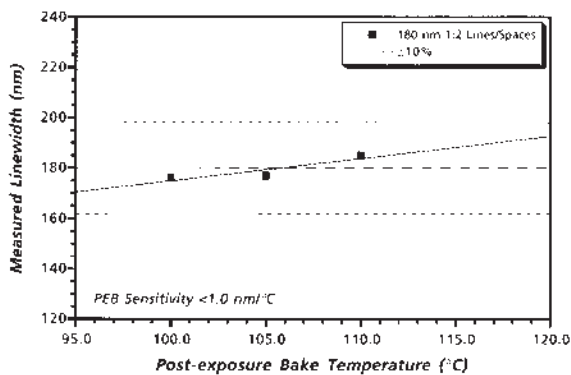
250 nm 1:2 Posts on AR3™ †
19.5 mJ/cm²



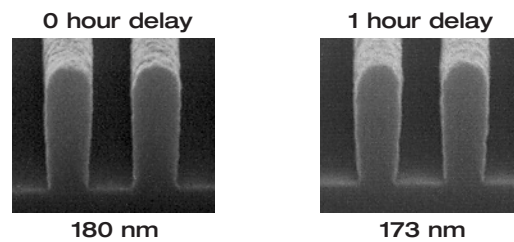
*ASML 5500/300 Stepper
†GCA XLS 7800 Stepper

CD Control

Post-exposure Bake Sensitivity



Post-exposure Delay Stability



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