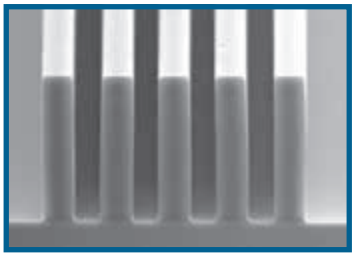
SU-8 3000
Permanent Epoxy Negative Photoresist

MICRO CHEM
NIPPON KAYAKU

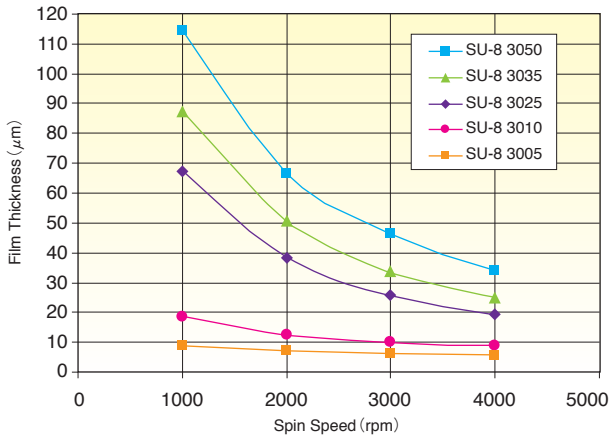
SU-8 3000 is a high contrast, epoxy based photoresist designed for micromachining and other microelectronic applications, where a thick, chemically and thermally stable image is required.

Attributes

- Excellent adhesion
- Reduced coating stress
- High aspect ratio imaging
- Vertical sidewalls
- >120μm film thickness in a single coat
- Excellent dry etch resistance



Contact aligner exposure
10μm features, 50μm SU-8 3000 coating



Process

① Substrate preparation
② Coating
③ Prebake
④ Exposure
⑤ Post exposure bake
⑥ Development
⑦ Rinse / Drying
⑧ Hard bake

(Approximate values)

Physical Properties	values
Adhesion Strength (MPa) Silicon/Glass/Glass & HMDS	71 / 23 / 44
Glass Transition Temperature (℃, DMA,tan δ)	198
Thermal Stability (℃, @5%wt. loss)	357
Tensile Strength (MPa)	73
Modulus (GPa)	2.0
Elongation at break (εb%)	4.8
Dielectric Constant (1GHz, 50%RH)	3.2
Dielectric loss (1GHz)	0.033
Volume Resistivity (Ωcm)	1.8×10^{16}
Water Absorption (%, 85℃ / 85%RH, 120h)	0.5

Line Pattern

Hole Pattern

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