

UV-Curable Composites for Nanoimprint Lithography and Micro Optical Elements

Key Features

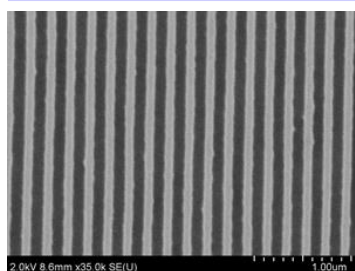
- ❖ Solvent free, low shrinkage UV-curable resins
- ❖ High Tg and excellent heat resistance (up to 300°C/572°F reflow compatible)
- ❖ Adjustable refractive index (nD = 1.5 – 1.6)
- ❖ High optical transparency and durability
- ❖ Spin-coatable, imprintable formulations suitable for sub-100 nm patterns

Applications

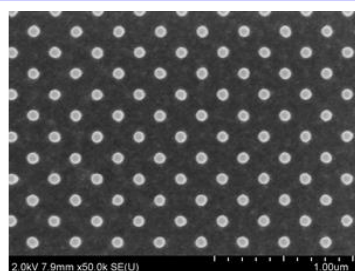
- ❖ Nanoimprint Lithography (NIL) process materials
- ❖ Diffractive Optical Elements (DOE)
- ❖ Micro Lens Arrays (MLA)
- ❖ Wafer-Level Optics (WLO)
- ❖ Meta optics, photonic components

Highlighted Products

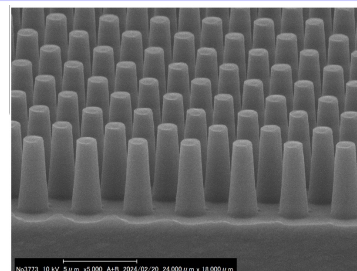
	NL-S1010	NL-S1040	NL-S1060-V1k	NL-S1060-V4k	NX003
Viscosity (25°C/77°F) [mPa·s]	2200	500	1200	4300	2200
RI (589nm)	1.514	1.507	1.601	1.600	1.688
300 °C reflow compatible	✓	✓	✓	✓	✓
85°C 85%RH 1000Hrs	✓	✓	✓	✓	✓
Key Feature	High Tg, durable	High Tg, durable, low viscosity, low shrinkage	High RI, low viscosity, transparent	High RI, transparent	Ultra-high RI, containing nano-filler



(NK Optimizer® NL-S1040



W100nm x H500nm)



(NX003 W1000nm x H5000nm)

Collaboration Welcome

We offer customization to meet your process conditions and optical design targets. Evaluation samples are available upon request.

Contact: Website → Contact / Request a Sample

Website: <https://www.shin-nakamura.com>