

UV-Curable Optical Materials for Nanoimprint and Advanced Photonics

Overview

The NK OPTIMER® NL-S Series from **Shin-Nakamura Chemical (Japan)** provides a family of **solvent-free UV-curable composites** designed for **precision optical patterning** and **high-temperature durability**.

Core Advantages

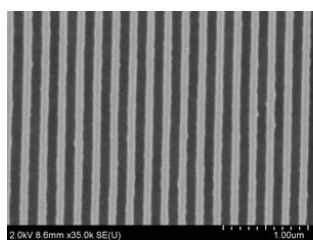
- ❖ Solvent-free & low-shrinkage
- ❖ Spin-coatable, imprintable
- ❖ High heat resistance (up to 300°C/572°F reflow)
- ❖ Adjustable refractive index (nD = 1.46 – 1.68)
- ❖ High transparency and reliability (> 98% total transmittance)

Main Applications

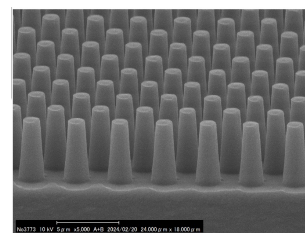
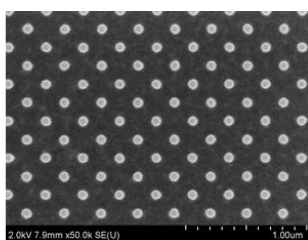
- ❖ Nanoimprint Lithography (NIL)
- ❖ Diffractive / Micro lens arrays (DOE / MLA)
- ❖ Wafer-level optics (WLO)
- ❖ AR/MR displays & waveguides
- ❖ Silicon photonics packaging

Key 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 Optimer® NL-S1040 W100nm x H500nm)



(NX003 W1000nm x H5000nm)

- ❖ Proven NIL performance with sub-100 nm features
- ❖ Customizable to meet your required properties

Contact: Website → Contact / Request a Sample

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

