

Nanoimprint Solution

ナノインプリント用フッ素系UV硬化樹脂 EPRIMA™ NIF series Fluorinated UV Curable Resin for Nanoimprint : EPRIMA™ NIF series

用途

Applications

LED(PSS, Photonic crystal)、半導体、ハードディスクメディア、光学部材、光学フィルムFPD、太陽電池、バイオチップ、MEMS 他

LED(PSS, Photonic crystal), Semiconductor, Hard disk media, Optical device, Optical film, FPD, PV, Biochip, MEMS etc.

特徴

Features

UV インプリントのレプリカモールド、永久膜、レジストに適している

Suitable for replicated mold, permanent layer and resist of nanoimprint

高離型性

Excellent demolding property

離型剤レスで使用可

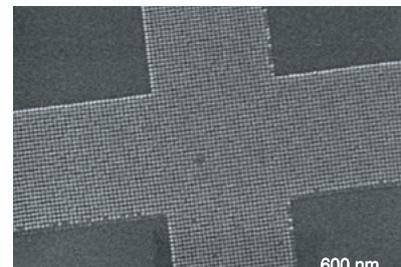
Release layer free process

無溶剤

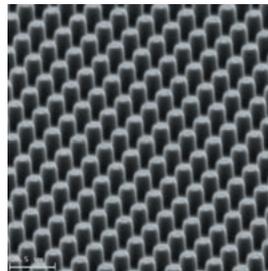
Solvent Free



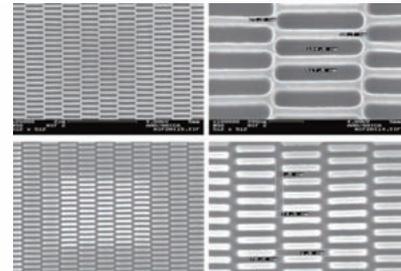
NIF



12.5nm pitch pattern



Photonic Crystal Structure



SEM images by courtesy of AMO

NIF replica mold grade

- UV Transparency

- Mechanical property
- Adhesion strength with substrate

NIF permanent layer grade

- Transparency (Visible)
- Refractive index ($\sim <1.6$)
- Durability (moisture, light, heat)
- Antistatic property
- Abrasion resistance
- Adjustment of viscosity (6~1200mPa·s)

NIF resist grade

- Dry etching resistance (CF₄, C₃F₈, Cl₂, BCl₃, Ar, O₂ etc.)
- Wet etching resistance
- Very thin residual layer

- Release property
- Low viscosity (inkjet, spin, die coating)
- Solvent Free
- Filling speed into mold
- Sensitivity
- Throughput