

開発品

光インターコネクション向け材料

SUNCONNECT®

1. 特徴

低光損失

0.09dB/cm (@850nm)
0.28dB/cm (@1.31 μ m)
0.44dB/cm (@1.55 μ m)

高耐熱性

熱分解温度 $\geq 300^{\circ}\text{C}$

液状硬化性組成物

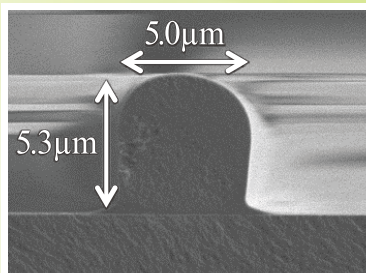


Ready-to use 材料としてご提供

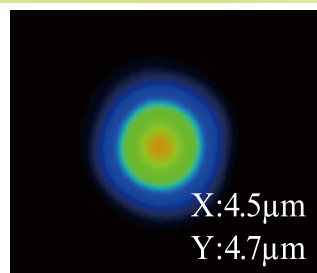
2. 光導波路応用例

例1) SI型矩形光導波路 (シングルモード)

a) コア断面 (光学顕微鏡)

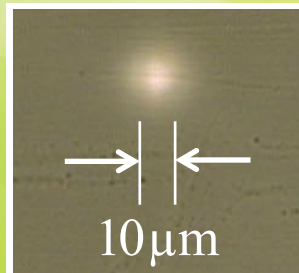


b) NFP 観察

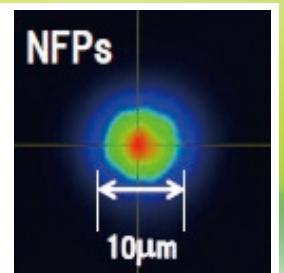


例2) GI型円形光導波路 (シングルモード)

a) 断面 (光学顕微鏡)



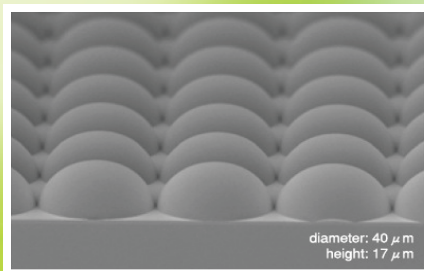
b) NFP 観察



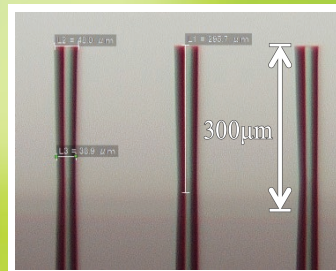
慶應義塾大学 石榑研究室 共同検討成果

3. 光接続応用例 (光結合)

例1) レンズアレイ
(インプリント加工)



例2) 光導波路構造
(フォトリソ加工)



東海大学 藤川研究室 共同検討成果

適用例

- レンズ結合構造
- 光導波路構造
- 近赤外透明接着

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SUNCONNECT®, a new ORMOCER® based Material
Technology Licensed by Fraunhofer ISC



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Under Development

materials for optical interconnects

SUNCONNECT®

1. Features

Low Optical Loss
(1.31 μ m, 1.55 μ m)

0.28dB/cm @1.31 μ m
0.44dB/cm @1.55 μ m

High Thermal Resistant
($T_{d5} \geq 300^{\circ}\text{C}$)

Curable Materials
(UV or thermal)

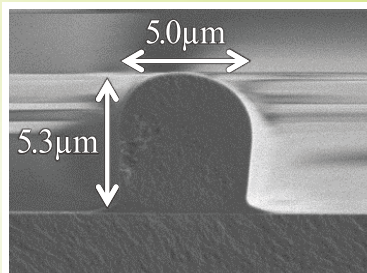


Provide sample as
ready-to use materials

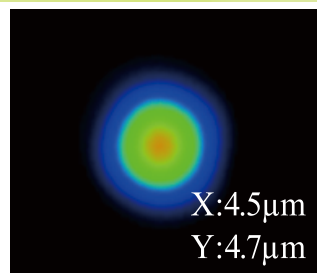
2. Application for Optical Waveguide

Ex.1) Step-index type (for Single mode)

a) Cross section of core

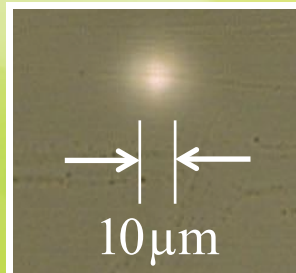


b) Observation of NFP

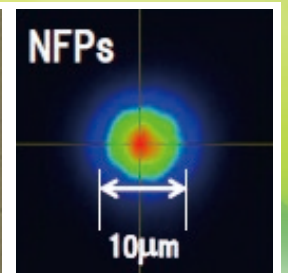


Ex.2) Graded-index type (for Single mode)

a) Cross section of core



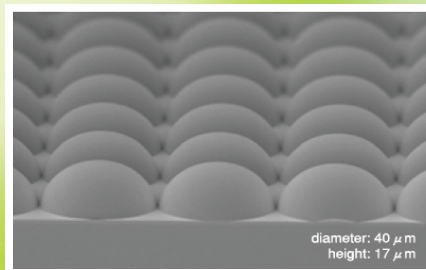
b) Observation of NFP



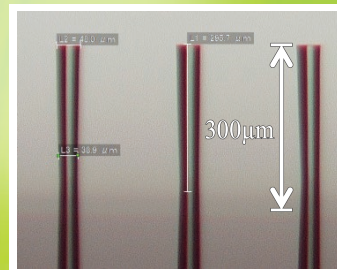
* Co-work with prof. Ishigure of Keio University

3. Application for Optical Coupling

Ex.1) Lens array structure
(by imprint method)



Ex.2) Waveguide structure
(by UV lithography)



* Co-work with prof.
Fujikawa of Tokai University

Possible applications

- Lens coupling
- Waveguide
- Optical adhesive
(ex. optical under-fill)

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