

**If you are seeking
 PLC and fiber array adhesion
 with high reliability, try these products**

Adhesives for Optical Waveguides

In order to achieve high reliability, a product must clear the tests conducted by the users themselves. If you have had even just a bit of dissatisfaction in reliability test results, please put NTT-AT's adhesives to the test. We will also offer consulting regarding adhesion related issues.



Excellence in Durability

Acrylate-based adhesives which have cleared a large number of reliability tests

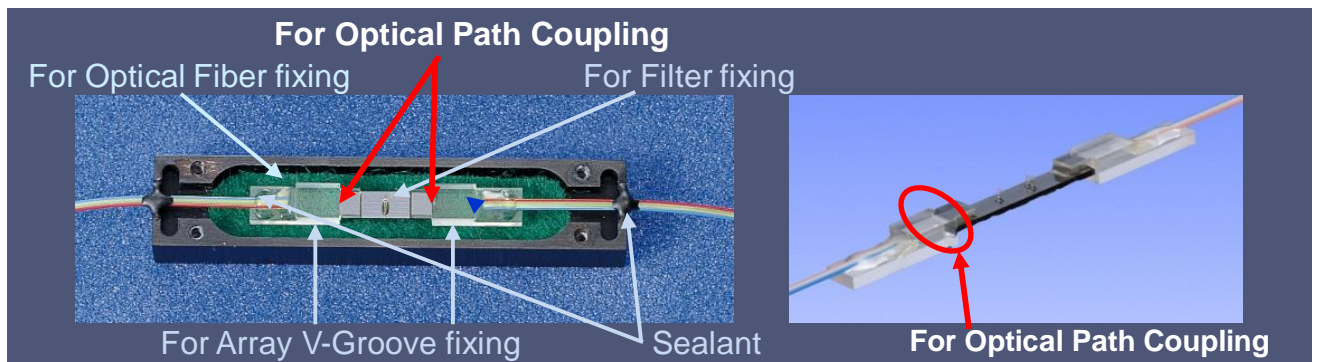
Adjustable Refractive Index

Epoxy adhesives with the same refractive index as quartz to deliver low reflectance

Simple Operability

The UV curing allows for adhesion in a short time frame

Structural Images



Standard Products Features

| Item | Conditions | Units | Epoxy | | Acrylate | |
|--------------------------------------|------------------------|--|----------------------|---------------------|---------------------|---------------------|
| | | | GA700H | GA700L | AT6001 | AT8224 |
| Curing Conditions | UV Intensity | mW/cm ² | 30 | 10 | 10 | 10 |
| | time | Min | 10 | 5 | 5 | 5 |
| Viscosity | 25°C | mPas | 280 | 250 | 470 | 145 |
| Refractive Index (after curing) | 589nm | - | 1.458 | 1.456 | 1.505 | 1.505 |
| | 830nm | | 1.453 | 1.450 | 1.495 | 1.496 |
| | 1300nm | | 1.448 | 1.446 | 1.490 | 1.491 |
| | 1550nm | | 1.447 | 1.445 | 1.489 | 1.489 |
| Optical Transmittance | 850nm | % (1mm) | 92 | 94 | 93 | 86 |
| | 1300nm | | 91 | 94 | 91 | 89 |
| | 1550nm | | 88 | 92 | 86 | 82 |
| Glass transition temperature (Tg) | tanδ _{max} | °C | 145 | 46 | 0 | 115 |
| shrinkage | Density change | % | 4 | 4 | 7 | 9 |
| Hardness | Shore D | - | 80 | 44 | 24 | 38 |
| Thermal expansion coefficient(CTE) | 25 - 100°C | × 10 ⁻⁵ °C ⁻¹ | 8 | 21 | 15 | 12 |
| Elastic modulus | 25°C | dyn/cm ² | 1 × 10 ¹⁰ | 5 × 10 ⁹ | 2 × 10 ⁸ | 7 × 10 ⁸ |
| Bending Adhesion Strength | Initial period | kgf/cm ² | 36 | 43 | 22 | 18 |
| | 121°C100% after 10h | | 15 | 33 | 27 | 21 |
| Water absorption | 1mm,after 24h | % | 0.5 | 0.8 | 3 | 10 |
| Weight loss on heating | 100°C100h | wt% | 0 | 5 | 3 | 3 |
| | 150°C10h | | 0 | 11 | 3 | 5 |

Adjustable Refractive Index products Features

| Item | Conditions | Units | High-Tg Type | Low-Tg Type |
|-----------------------|---------------------|-------------------------------------|--------------|-------------|
| Curing Conditions | UV Intensity | mW/cm ² | 30 | 10 |
| | time | min | 10 | 10 |
| Viscosity | 25°C | mPas | 250~2000 | 200~560 |
| Refractive Index | 1550nm | - | 1.446~1.547 | 1.445~1.549 |
| Optical Transmittance | 1550nm | % | 89~90 | 86~90 |
| Tg | tanδ _{max} | °C | 140~150 | 40~50 |
| shrinkage | Density change | % | 3~5 | 4~8 |
| Hardness | Shore D | - | 75~80 | 23~45 |
| CTE | 25 - 100°C | × 10 ⁻⁵ °C ⁻¹ | 6~8 | 8~22 |

For more information

<http://www.ntt-at.com/product/adhesive/>



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