LiPOLY®
SHIU LI TECHNOLOGY CO.,LTD

# N700C

## Non-Silicone Thermal Conductive Pad (Low-Outgassing)

LiPOLY N700C is a silicone-free thermal interface material based on a non-silicone resin system. It contains no low-molecular-weight siloxane volatiles and features low outgassing characteristics, eliminating concerns of contamination and electrical contact issues. N700C complies with ASTM E595 requirements, making it ideal for applications demanding high cleanliness and reliability. With excellent flexibility, high thermal conductivity, low compression force, and high compressibility, N700C minimizes mechanical stress on components while maintaining low thermal resistance and outstanding heat dissipation performance.

## FEATURES

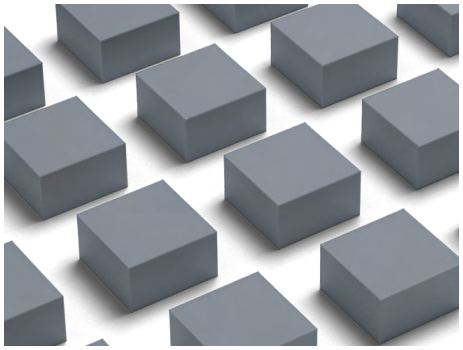
/ Thermal conductivity: 5.0 W/m·K
/ It's made by non-silicone resin materials
/ Low contact thermal resistance
/ With electrical insulation
/ Outstanding thermal conductivity
/ Applicable to optical and sensitive electric components

## TYPICAL APPLICATION

/ HDDS
/ Optical appliance
/ 5G base station & infrastructure
/ EV electric vehicle

## SPECIFICATIONS

/ Sheet form
/ Die-cut parts

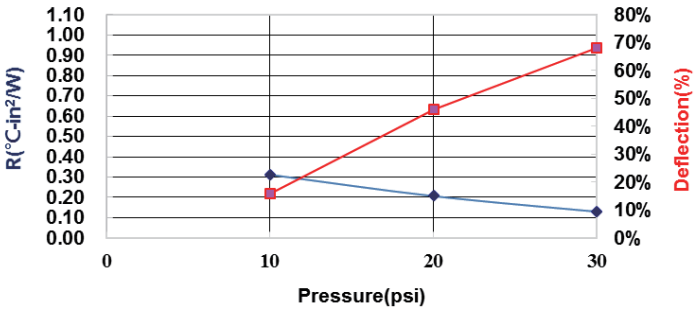


## TYPICAL PROPERTIES

| PROPERTY | N700C | UNIT | TEST METHOD |
|---|---|---|---|
| Color | Gray | - | Visual |
| Surface tack 2-side/1-side | 2 | - | - |
| Thickness | Customized | mm | ASTM D374 |
| Density | 3.2 | g/cm³ | ASTM D792 |
| Hardness | 55 | Shore OO | ASTM D2240 |
| Application temperature | -60~130 | °C | - |
| Low molecular Siloxane (D3 to D20 total) | N.D | % | Gas Chromatography |
| Total Mass Loss (TML) | ≤ 1.0 | % | ASTM E595 |
| Collected Volatile Condensable Materials (CVCM) | ≤ 0.1 | % | ASTM E595 |
| Water Vapor Regained | ≤ 0.02 | % | ASTM E595 |
| ROHS & REACH | Compliant | - | - |
| COMPRESSION@1.0mm | | | |
| Deflection @10 psi | 16 | % | ASTM D5470 modify |
| Deflection @20 psi | 46 | % | ASTM D5470 modify |
| Deflection @30 psi | 68 | % | ASTM D5470 modify |
| ELECTRICAL | | | |
| Dielectric breakdown | 8 | KV/mm | ASTM D149 |
| Surface resistivity | $>10^{11}$ | Ohm | ASTM D257 |
| Volume resistivity | $>10^{10}$ | Ohm-m | ASTM D257 |
| THERMAL | | | |
| Thermal conductivity | 5.0 | W/m·K | ASTM D5470 |
| Thermal impedance@10 psi | 0.312 | °C-in²/ W | ASTM D5470 |
| Thermal impedance@20 psi | 0.208 | °C-in²/ W | ASTM D5470 |
| Thermal impedance@30 psi | 0.132 | °C-in²/ W | ASTM D5470 |

The chemical formula indicates that if Cyclic polydimethylsilox-ane (HO-[Si(CH3)2O]n-H) is non-reaction, it's volatile anytime and everywhere.
For example, when the electric products which has been put in a confined space, the volatile of low-molecular-weight silox-anes will makes the elecetic products uncontacted.

### Thermal Impedance vs. Pressure vs. Deflection




Note: All specifications provided by LiPOLY are subject to change without notice. The test methods used by LiPOLY are based on the TIM Tester method and ASTM D5470 test method. These test methods are used as the definition standards for LiPOLY. Property values provided in this document are not for product specifications or guaranteed. This document does not guarantee the performance and quality required for the purchaser's specific purpose. The purchaser needs to evaluate and verify the safety before using the material. We strongly recommend the purchaser pre-test the product and verify the performance of the product under the purchaser's specific conditions. Liability and use of the product are the responsibility of the end user. LiPOLY makes no warranty as to the suitability, merchantability, or non-infringement of any LiPOLY material or product for any specific or general uses. LiPOLY shall not be liable for incidental orconsequential damages of any kind. All LiPOLY products are sold in accordance with the LiPOLY Terms and Conditions in effect at the time of purchase and a copy of which will be furnished upon request. All rights reserved, including LiPOLY trademarks or registered trademarks of LiPOLY or its affiliates. Statements concerning possible or suggested uses made herein shall not be relied upon or be constructed as a guaranty of patent infringement. Copyright LiPOLY.