

UL Flammability Thermal Conductive Tape

LiPOLY AT910 is a fiberglass reinforced thermally conductive tape with UL high temperature heat resistance. The thermal conductivity is 1.0 W/m*K. The stickiness and strength of the thermal tape will increase when temperatures and pressure rise. They are designed to securely bond heat sinks to power dissipating components without an additional clamping mechanism.

■ FEATURES

- / Thermal conductivity:1.0 W/m*K
- / Excellent adhesive properties
- / Designed for manufacture
- / Excellent long term reliability
- / Fiberglass reinforced layer

■ TYPICAL APPLICATION

- / Automotive electronics
- / Telecommunications
- / LED light bar & LED lamp
- / Between any heat-generating component and heat sink
- / 5G base station & infrastructure
- / EV electric vehicle

■ SPECIFICATIONS

- / Roll form / Sheet form
- / Die-cut parts

■ TYPICAL PROPERTIES

| PROPERTY | AT910 | | TEST METHOD | UNIT |
|--|-------------------|-------------------|------------------------|------------------------|
| Color | White | | Visual | - |
| Resin base | Acrylic | | - | - |
| Reinforced layer | Fiberglass | | - | - |
| Thickness | 0.15 | 0.25 | ASTM D374 | mm |
| Density | 1.8 | 1.8 | ASTM D792 | g/cm ³ |
| Application temperature | -60~120 | -60~120 | - | °C |
| Short time temp. @30sec | 200 | 200 | - | °C |
| ROHS | Compliant | Compliant | - | - |
| ADHESION | | | | |
| Initial tack | 11 | 8 | PSTC-6 | cm |
| Lap shear strength | 50 | 50 | ASTM D1002 | N/cm ² |
| Die shear strength@25°C | 100 | 100 | - | N/cm ² |
| Die shear strength@80°C | 70 | 70 | - | N/cm ² |
| Holding power 1kg @25°C | >10000 | >10000 | PSTC-7 | min |
| Holding power 1kg @80°C | >10000 | >10000 | PSTC-7 | min |
| 90° Peeling strength @ 25°C, 72 hrs | >5 | >6 | ASTM D3330 | N/inch |
| 90° Peeling strength @ Thermal aging | >14 | >20 | 80°C 1000 hrs | N/inch |
| 90° Peeling strength @ HAST | >20 | >24 | 85°C/85%RH 1000 hrs | N/inch |
| 90° Peeling strength @ Thermal cycling | >27 | >28 | -40°C~120°C 500 cycles | N/inch |
| ELECTRICAL | | | | |
| Dielectric breakdown | 2 | 3 | ASTM D149 | KV |
| Surface resistivity | >10 ¹¹ | >10 ¹¹ | ASTM D257 | Ohm |
| Volume resistivity | >10 ¹¹ | >10 ¹¹ | ASTM D257 | Ohm-m |
| THERMAL | | | | |
| Thermal conductivity | 1.0 | 1.0 | ASTM D5470 | W/m*K |
| Thermal impedance@5psi | 0.81 | 1.38 | ASTM D5470 | °C-in ² / W |
| Thermal impedance@10psi | 0.78 | 1.30 | ASTM D5470 | °C-in ² / W |
| Thermal impedance@15psi | 0.76 | 1.25 | ASTM D5470 | °C-in ² / W |

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 or consequential 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 construed as a guaranty of patent infringement. Copyright 2024 LiPOLY.