

# ST6000-S

## UL Flammability Thermal Conductive Tape

LiPOLY ST6000-S is a thermally conductive tape with UL high temperature heat resistance. The thermal conductivity is 1.8 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:1.8 W/m\*K  
 / High temperature stability  
 / Easy to assemble

### ■ TYPICAL APPLICATION

/ Power supplies  
 / Motor controls  
 / Power semiconductors  
 / 5G base station & infrastructure  
 / EV electric vehicle

### ■ SPECIFICATIONS

/ Roll form / Sheet form  
 / Die-cut parts

### ■ TYPICAL PROPERTIES

PROPERTY	ST6000-S	TEST METHOD	UNIT
Color	White	Visual	-
Resin base	Silicone	-	-
Reinforced layer	None	-	-
Thickness	0.2	ASTM D374	mm
Density	2.3	ASTM D792	g/cm <sup>3</sup>
Application temperature	-60~180	-	°C
Short time temp. @30sec	288	-	°C
ROHS	Compliant	-	-
ADHESION			
Lap shear strength	35	ASTM D1002	N/cm <sup>2</sup>
Die shear strength@25°C	50	-	N/cm <sup>2</sup>
Die shear strength@80°C	50	-	N/cm <sup>2</sup>
Holding power 1kg @25°C	>10000	PSTC-7	min
Holding power 1kg @80°C	>10000	PSTC-7	min
90° Peeling strength @ 25°C, 72 hrs	>8	ASTM D3330	N/inch
90° Peeling strength @ Thermal aging	>7	80°C 1000 hrs	N/inch
90° Peeling strength @ HAST	>10	85°C/85%RH 1000 hrs	N/inch
90° Peeling strength @ Thermal cycling	>9.5	-40°C~120°C 500 cycles	N/inch
ELECTRICAL			
Dielectric breakdown	3.5	ASTM D149	KV
Surface resistivity	>10 <sup>9</sup>	ASTM D257	Ohm
Volume resistivity	>10 <sup>9</sup>	ASTM D257	Ohm-m
THERMAL			
Thermal conductivity	1.8	ASTM D5470	W/m*K
Thermal impedance@5psi	0.81	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@10psi	0.72	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@15psi	0.65	ASTM D5470	°C-in <sup>2</sup> / 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 constructed as a guaranty of patent infringement. Copyright LiPOLY.