

Ultra Thin Thermal Film

LiPOLY AS02 is a material with double sided inherent tack, low thermal resistance and high thermal conductivity. It has excellent compressive strength characteristics and good electrical isolation function for high-power electronic components, making it the best choice for thin design installation. Customized Die-Cut and molding are available.

■ FEATURES

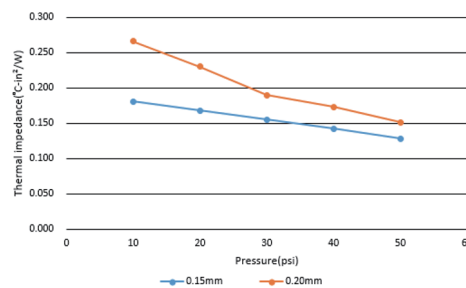
- / Great thermal conductivity
- / Low thermal impedance
- / High compressibility
- / Excellent elasticity
- / Suitable for high performance products
- / Die-cut part



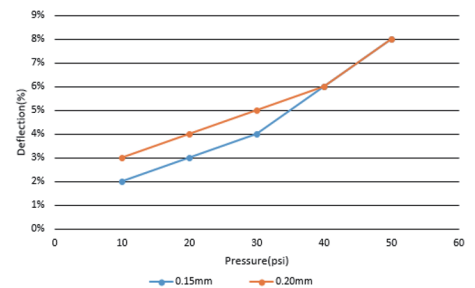
■ TYPICAL APPLICATION

Electronic Components - Notebook computers, Heat pipe assemblies, Memory modules, TV hardware, Automotive electronics, Mobile devices, HPC , servers 5G base station & infrastructure, EV electric vehicle

Thermal Resistance vs. Pressure



Compression vs. Pressure



■ TYPICAL PROPERTIES

PROPERTY	UNIT	AS02		TEST METHOD
Thermal conductivity	W/m²K	4.5	4.5	ASTM D5470 Modified
Thickness	mm	0.15	0.20	ASTM D374
	inch	0.0059	0.0079	ASTM D374
Color	-	Green	Green	Visual
Flame rating	-	V-0	V-0	UL 94
Dielectric breakdown	KV	4	6	ASTM D149
Weight loss	%	<1	<1	ASTM E595 Modified
Density	g/cm³	3.0	3.0	ASTM D792
Application temperature	°C	-50~180	-50~180	-
Volume resistivity	Ohm-m	1x10 ¹²	1x10 ¹²	ASTM D257
Elongation	%	10	10	ASTM D412
Standard Format	-	Sheet	Sheet	-
Hardness	Shore A	25	25	ASTM D2240
ROHS & REACH	-	Compliant	Compliant	-
Surface tack 2-side/1-side	-	2	2	-
Surface resistivity	Ohm	1x10 ¹²	1x10 ¹²	ASTM D257
COMPRESSION				
Deflection @10 psi	%	2	3	ASTM D5470
Deflection @20 psi	%	3	4	ASTM D5470
Deflection @30 psi	%	4	5	ASTM D5470
Deflection @40 psi	%	6	6	ASTM D5470
Deflection @50 psi	%	8	8	ASTM D5470
THERMAL				
Thermal impedance@10 psi	°C-in²/ W	0.181	0.266	ASTM D5470
Thermal impedance@20 psi	°C-in²/ W	0.168	0.230	ASTM D5470
Thermal impedance@30 psi	°C-in²/ W	0.155	0.190	ASTM D5470
Thermal impedance@40 psi	°C-in²/ W	0.142	0.173	ASTM D5470
Thermal impedance@50 psi	°C-in²/ W	0.128	0.151	ASTM D5470

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.