

## Description

LISAT LST-TIN-52 is thermally conductive insulation material. It is developed for application requiring high thermal performance and electrical isolation. A special tailored film with excellent thermal conductivity as carrier and modified silicon coating on both side, it gives good anti-scratch property and high temperature operation. A reliable electrical insulation provide safe application for longer period at tougher working condition. Smooth surface and softer hardness allow low thermal impedance at lower pressure which is perfect for use by power semiconductor or high power LED heat dissipation material.



## Features and Benefits

- Thermal Conductivity of  $< 1.0 \text{ W/m-k}$
- LTI\* :  $0.000310 \text{ K-m}^2/\text{W}$  (@50 psi)
- High Dielectric Performance
- Low Mounting Pressure
- Smooth and highly compliant surface
- Replace Ceramic Insulators

\* = Low Thermal Impedance

## Typical Applications

- @ UPS Unit Switch-Mode Power Supply
- @ Motor Controls
- @ Automotive Electronics
- @ Power Semiconductors
- @ Amplifier Component Heat Dissipation
- @ Metal Heat Sink or Spreader
- @ Applications with High Heat Generated

## Properties

Note : Below technical data and information should be thought as typical or representative only and should not be use for specification purpose.

### TYPICAL PROPERTIES OF THERMAL INSULATOR LST-TIP-524

PROPERTY	IMPERIAL VALUE	METRIC VALUE	REFERENT STANDARD
Color	Yellow	Yellow	Visual
Reinforcement Carrier	Polymide	Polymide	N/A
Thickness (mils)/(mm)	6	0.15	ASTM D374
Hardness (Shore A)	89	89	ASTM D2240
Tensile Strength (psi)/(Mpa)	5000	34	ASTM D1000
Continous Use Temp (°F)/(°C)	-76 to 356	-60 to 180	N/A
<b>ELECTRICAL</b>			
Dielectric Breakdown Voltage (Vac)	7000	7000	ASTM D149
Volume Resistivity ( $\Omega$ -meter)	$1.1 \times 10^{12}$	$1.1 \times 10^{12}$	ASTM D257
Flame Rating	V-O	V-O	UL94
<b>THERMAL</b>			
Thermal Conductivity (W/m-K)	1.0	1.0	ASTM5470

### THERMAL PERFORMANCE vs PRESSURE

Pressure (psi)	5	10	25	50	60	80	100
Thermal Impedance ( $\text{K-m}^2/\text{W}$ )	0.000716	0.000677	0.000563	0.000310	0.000249	0.000470	0.000245
Thermal Impedance ( $^{\circ}\text{C-in}^2/\text{W}$ )	1.110	1.050	0.870	0.480	0.390	0.380	0.380
Compression Rate (%)	3%	7%	12%	13%	14%	15%	15%

Part-Number Ordering System : LST-TIN-524-x.xx-

Blank = Non Adhesive  
AC = Adhesive Coated  
Standard Thickness = 0.15mm

LISAT

2870 Scott Street, Suite 101 Vista, CA 92081, U.S.A.

Tel : (1)-760-5981066 / Fax : (1)-760-5982871 / Email : alan@lisat.net / Web : www.lisat.net