



## Thermally Conductive Phase-Change Sheet

Phase change materials are known to be the highest performance of the sheet type TIMs. When properly used and cycled, Thermal Phase Change materials will transform from a solid into a flowing liquid state and conform to the shapes of the gaps. With almost no gaps and a very low thermal resistance, Thermal Phase Change materials have a superior heat transfer effect between surfaces. In addition to the other benefits, Thermal Phase Change materials will produce very little outgassing due to the non-silicone based chemical composition of the material.

Thermal Properties		
	TPC30	Test Method
Thermal Conductivity, W/m-K	3 ± 0.25	ASTM D5470
Thermal Resistance, m <sup>2</sup> K/W	0.001847	
Physical Properties		
Color	Gray	Visual
Construction & Composition	Polymer	-
Thickness, in (mm)	0.010, 0.012 (0.25, 0.30)	ASTM D374
Density at 23 °C, lb <sub>m</sub> /in <sup>3</sup> (g/cm <sup>3</sup> ) @ 23°C	0.145 ± 0.018 (2.4 ± 0.5)	ASTM D792
Applicable temperature range, °F (°C)	-40 - 257 (-40 - 125)	-
Cold and hot shock resistance cycle, Times	2000 min	GB2423.22
Phase Change Temperature, °F (°C)	122 ± 9 (50 ± 5)	ASTM D3418
Regulatory		
Shelf Life(23°C,55%RH), months	12	-

## Applications

- Integrated Circuits
- Communication Equipment
- LED Lighting
- Aerospace
- Automotive electronics

## Benefits

- Excellent thermal conductivity
- Low thermal resistance
- Changes shape when heated to fill complex gaps

## Material

Phase Change Polymer



THEMALLY CONDUCTIVE  
PHASE-CHANGE SHEET