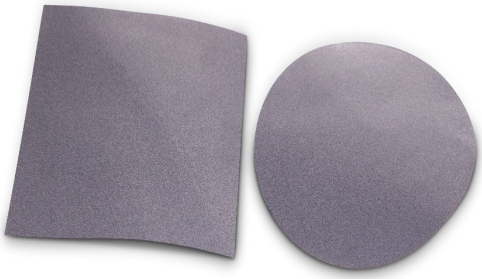
T69-50
Graphite Sheets

Version 1.280318



Graphite Sheets
T69-50 is a high performing thermal interface material which is very thin, synthetically made from a highly oriented graphite polymer film and has excellent thermal properties in both the XY and the Z axis. T69-50 is Ideal for providing thermal management in some of the most demanding of applications.

Features
Highly oriented pyrolytic graphite sheet with high thermal conductivity
It is flexible and has features of ultra-thin and high EMI shielding effect
Excellent thermal conductivity: 1600 W/ mK (4x as high as copper, 7x as high as aluminium)
Light weight: Specific gravity: 2.3
Flexible and easy to be cut or trimmed
Low thermal resistance
Low moisture content: < 1%

Applications
Electronic components: IC, CPU, MOS
LED, M/B, P/S, Heat Sink
LCD, TV, Notebook PC, PC Telecom Device, Wireless, etc.
DDR II Module, DVD Applications, Hand-set applications, etc.

Properties
✓ REACH Compliant
✓ ROHS Compliant

Property		T69-50	Unit	Tolerance	Test Method
Thickness		50um	mm	-	Micrometer
		0.050	mm	±0.015	Micrometer
Thermal Conductivity	X-Y Direction	1300	W/mK	-	AC calorimeter
	Z Direction	20	W/mK	-	Laser flash
Thermal diffusivity		8 - 10 (0.0008-.0010m²/s)	cm²/s	-	AC calorimeter
Density		1.7 (1700 kg/m³)	g/cm³	-	Archimedes law
Specific heat (at 50°C)		0.85 (850J/kgk)	(J/gk)	-	-
Heat resistance		400	°C	-	-
Extensional strength	X-Y Direction	20	Mpa	-	-
	Z Direction	0.4	Mpa	-	-
Expansion coefficient	X-Y Direction	9.3×10^{-7}	1/K	-	-
	Z Direction	3.2×10^{-5}	1/K	-	-
Bending test (R5/180°C)		20000 or more	Times	-	-
Electric conductivity		20000	S/cm	-	JISK7194
Operating Temperature		-50 to 200	°C	-	-
Shelf Life		36	months	-	-

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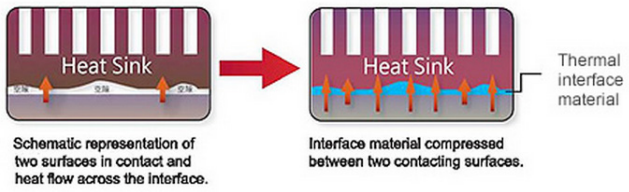
Standard Weights & Dimensional Tolerance

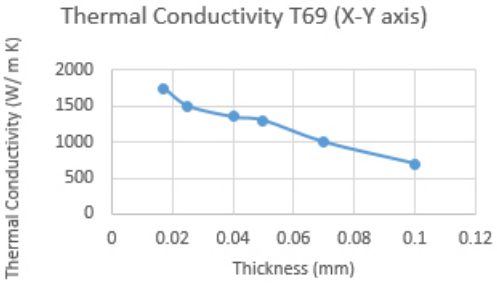
Size	Thickness (mm)	Weight (gr)
	200x200x0.05	1.0

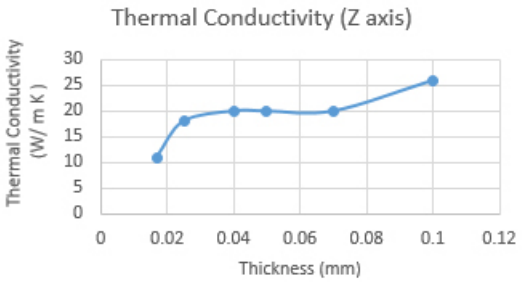
* All measurements in weights are in gr
** All sizes are in mm

Die-Cut Thickness Tolerances	Thickness (mm)	Tolerance (mm)
	0.3	±0.03
	0.5	±0.05
	0.8	±0.08
	1.0	±0.1
	1.2	±0.12
	1.5	±0.15
	2.0	±0.2
	2.5 - 3.5	±0.25
	4.0 - 4.5	±0.3
	5.0	±0.35
	6.0 - 8.0	±0.4
	9.0	±0.45
	10.0	±0.5
	>10.0	±0.5

Data







* Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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