



HITHERM™ Graphite Thermal Interface Materials



Thermal Management

RAPID
RIGHT
RELIABLE

HITHERM graphite thermal interface materials (TIMs) provide a solution for long-life, zero maintenance applications with extreme heat cycles. HITHERM's flexible graphite are the ideal thermal management solution for today's demanding power electronics and lighting.

- Consistent, reliable thermal performance enabling zero maintenance applications
- Will not flow or pump out under any thermal extremes, thermal cycles, or part orientation
- Assembly-ready foil form factor eliminates dispensing and cleaning processes
- Minimal outgassing prevents fouling of optics in lighting applications
- Silicone-free graphite material eliminates risk of clouding LED optics
- RoHS compliant and UL94 V0 Listed





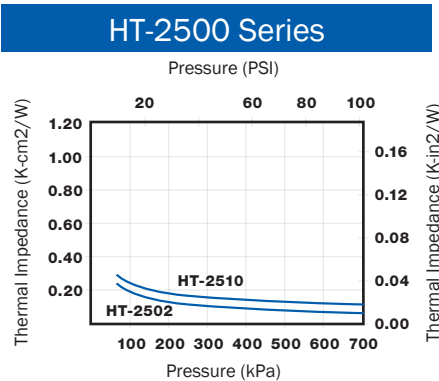
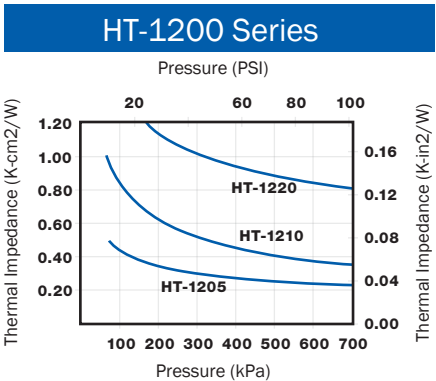
Product Series Characteristics^[1]

Characteristic	Pure Graphite 1200 Series	Polymer Enhanced 2500 Series	
Typical Thermal Conductivity ^[2] Through-Plane • In-Plane (W/mK)	10 • 150	16 • 120	
Thermal Thickness with Tolerance 0.127 mm (0.005") ± 10% 0.25 mm (0.010") ± 10% 0.51 mm (0.020") ± 10%	HT-1205 HT-1210 HT-1220	HT-2505 HT-2510 -	
Electrical Resistivity ^[3] Through-Plane • In-Plane (μΩm)	60 • 1230	80 • 1550	
Operating Temperature (°C)	-40 TO +400	-25 TO +125	
Hardness (Shore A)		85	
Coefficient of Thermal Expansion (CTE) Through-Plane • In-Plane (ppm/°C)		-0.4 • 27.0	
Specific Heat @ 25 °C (J/kg·°C)		710	
RoHS Compliant		Yes	

HITHERM™ Thermal Interface Materials-Coating Options

Characteristic	Adhesive "A" Coating	
Thickness (mm • inches)	0.008 • 0.0003	
Operating Temperature (°C)	-40 to +150	
Thermal Impedance ^[4] per Side (cm ² °C/W @ 110 kPa)	0.16	
Thermal Conductivity (W/mK)	-	
Dielectric Strength (V)	-	
Adhesive Strength ^[5] (g/cm ²)	700 Typical 450 Minimum	

Thermal Impedance v. Interface Pressure



Notes:
[1] Properties listed are typical and cannot be used as acceptance or rejection criteria.
[2] In-plane conductivity at ambient temperature determined using Angstrom's method; through-plane determined using ASTM D5470 Modified method.
[3] ASTM C611.4 Point Resistivity Test.
[4] ASTM D5470 Modified (at 11kPa/16 psi/1.1 bar).
Total thermal impedance = impedance of graphite + impedance of coating.
[5] Adhesive strength is based on lap shear test (ASTM D3163) with material adhering to a glass plate.
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