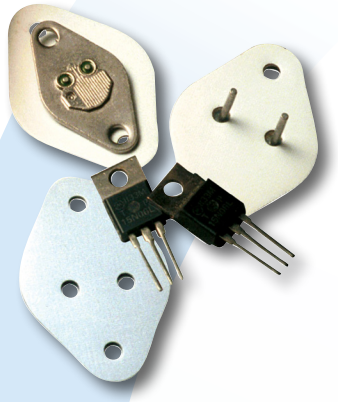
Laird TECHNOLOGIES

Innovative **Technology** for a **Connected** World

T-gard™ 200 Series
Thermally Conductive Insulators



HIGH PERFORMANCE THERMAL INTERFACE PRODUCTS

The T-gard™ 200 is a high performance interface pad. Consisting of silicon/boron composites, these fiberglass-reinforced pads are used when the lowest thermal resistance and highest dielectric strength are required

A high-tear, cut-through and puncture-resistant product, the T-gard™ 200 is tough and strong. Burrs cause no problems for the material and the pad will not dry out, crack or fail when pressured between mating parts.

The T-gard™ 200 is available in 0.010" (0.25 mm), 0.020" (0.51 mm) and 0.030" (0.75mm) thicknesses.

FEATURES AND BENEFITS

- High thermal Conductivity of 5.0 W/mK
- High dielectric strength of > 6,000 volts
- Resistant to tears and punctures
- UL® 94 V0 rated

APPLICATIONS

- Audio and video components
- Automotive control units
- General high pressure interfaces
- Motor controllers
- Power conversion equipment
- Power semiconductors
  - T0 packages, M0SFETs and IGBTs

global solutions: local support™

Americas: +1.800.843.4556
Europe: +49.8031.2460.0
Asia: +86.755.2714.1166

CLV-customerservice@lairdtech.com
www.lairdtech.com/thermal

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	T-GARD™ 210	T-GARD™ 220	T-GARD™ 230	TEST METHOD
Construction & Composition	Reinforced boron nitride filled silcone elastomer	Reinforced boron nitride filled silcone elastomer	Reinforced boron nitride filled silcone elastomer	
Color	White	Blue	Green	Visual
Thickness	0.010" (0.25mm)	0.020" (0.51mm)	0.030" (0.76mm)	
Thickness tolerance	±0.002" (±0.05mm)	±0.002" (±0.05mm)	±0.003" (±0.075mm)	
Specific Gravity (Density)	1.52 g/cc	1.45 g/cc	1.47 g/cc	Helium Pycnometer
Hardness	85 Shore A	80 Shore A	80 Shore A	ASTM D2240
Tensile Strength	N/A	N/A	N/A	ASTM D412
% Elongation	N/A	N/A	N/A	ASTM D412
Outgassing TML (Post Cured)	0.06%	0.06%	0.06%	ASTM E595
Outgassing CVCM (Post Cured)	0.05%	0.05%	0.05%	ASTM E595
UL Flammability Rating	94 V0	94 V1	Not Rated	E180840
Temperature Range	-60°C to 200°C	-60°C to 200°C	-60°C to 200°C	
Thermal Conductivity	5 W/mK	5 W/mK	5 W/mK	ASTM D5470 (modified)
Thermal Impedance @ 100 psi @ 689 KPa	0.18°C-in²/W 1.17°C-cm²/W	0.35°C-in²/W 2.26°C-cm²/W	0.40°C-in²/W 2.28°C-cm²/W	ASTM D5470 (modified)
Breakdown Voltage	6,000 VAC	10,000 VAC	20,000 VAC	ASTM D149
Volume Resistivity	$5x10^{13}$ ohm-cm	$5x10^{13}$ ohm-cm	$5x10^{13}$ ohm-cm	ASTM D257
Dielectric Constant @ 1 MHz	3.32	3.32	3.32	ASTM D150

Standard thicknesses: 0.010" (0.25mm), 0.020" (0.51mm), 0.030" (0.76mm)
Please contact Laird Technologies for alternate thicknesses.

Standard sheet sizes: 0.010": 14" x 16" (356mm x 406mm), 0.020" and 0.030": 8" x 8" (203mm x 203mm) and 16" x 16" (406mm x 406mm)
Individual die-cut shapes can be supplied.

Pressure sensitive adhesive: Request no adhesive with "AO" suffix. Request adhesive on one side with "A1" suffix.
Double-sided adhesive is not available.

Reinforcement: T-gard™ 200 sheets are fiberglass reinforced.

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