Material Features:

- Soft Surface
- Good compressibility
- Low thermal impedance
- Good thermal stability

Applications

- Graphic Processors
- Base stations
- Microprocessors
- Telecommunications

Storage Conditions:

- Store in dark environment
- Storage Temperature: ≤ 30 ˚C
- Storage Humidity:≤ 70 %

Shelf Life:

- Stored at storage conditions: Two years

Thermal Impedance:

- @40 psi for TCF350
- @30 psi for TCF160
- @20 psi for TCF200 and TCF240

Custom Die Cut Geometrics Available

How to Order Product to Size:
WWWW = Width in inches (ex 5.00" = 0500)
LLLL = Length in inches (ex 10.00" = 1000)
TTT = Thickness in inches (ex. 0.040" = 040)

Example: TCF160-05001000-040
Part numbers will be provided in inches

TCF Series

Leader Tech's TCF series are a new ultra-thin carbon fiber thermal pad with low thermal resistance. This thermal pad mainly uses carbon fiber as a thermally conductive filler by producing the carbon fiber vertically arranged in the polymer matrix to form a thermal conduction path in the vertical direction, greatly enhancing the heat transfer efficiency. In addition, the ultrathin carbon fiber thermal pad is highly flexible, which can be used as a replacement of thermal grease material.

Part Series	Test Method	TCF160	TCF200	TCF250	TCF350
Thermal Properties					
Thermal Conductivity Z axis (W/m-K)	ASTM D 5470	16	20	25	35
Thermal Impedance (°C-in²/W)	ASTM D 5470	≤ 0.2	≤ 0.18	≤ 0.15	≤ 0.05
Physical Properties					
Color	Visual	Gray Black	Gray Black	Gray Black	Gray Black
Thickness Range (in, (mm))	ASTM D 374	0.010-0.118 (0.25 - 3.0)	0.020-0.118 (0.5 - 3.0)	0.020-0.118 (0.5 - 3.0)	0.010-0.031 (0.25 - 0.80)
Width & Length (in, (mm))	N/A	4.72 x 4.72 (120 x 120)	4.72 x 4.72 (120 x 120)	4.72 x 4.72 (120 x 120)	4.72 x 4.72 (120 x 120)
Density (lb/in³, (g/cc))	ASTM D 792	0.123 (3.4)	0.119 (3.3)	0.108 (3.0)	0.067 (1.85)
Hardness (Shore 00)	ASTM D 2240	65	65	65	65
Compression Ratio @50 Psi (%)	ASTM D 695	≥ 40	≥ 40	≥ 40	≥ 30
Tensile Strength (M Pa)	ASTM D 412	≥ 0.1	≥ 0.1	≥ 0.1	≥ 0.7
Tear Strength (N/mm)	ASTM D 624	≥ 0.5	≥ 0.5	≥ 0.5	≥ 0.5
Elongation (%)	ASTM D 412	≥100	≥100	≥100	≥ 70
Operating Temperature(°F (C))	IEC60068-2-14	-58 to 356 (-50 to 180)	-58 to 356 (-50 to 180)	-58 to 356 (-50 to 180)	-58 to 356 (-50 to 180)
Shelf Life (Months)	N/A	24	24	24	24

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