

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: $\leq 30^{\circ}\text{C}$
- Storage Humidity: $\leq 70\%$

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 ($^{\circ}\text{C}\text{-in}^2/\text{W}$)	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/in ³ , (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($^{\circ}\text{F}$ (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

STATEMENT OF LIEU OF WARRANTY: All technical information and data in this document is based on tests and is believed to be accurate and reliable. Nevertheless, since the products described herein are not provided to conform with mutually accepted specifications and the use thereof is unknown, the manufacturer and seller of the products do not guarantee results, freedom from patent infringement, or suitability of the products for any application thereof. The manufacturer and seller of the products described in this document will provide all possible technical assistance and will replace any products proven defective. No statement or recommendations made by the manufacturer or seller not contained herein shall have any force of effect unless in conformity with an agreement signed by an officer of the seller and manufacturer. Product testing by the purchaser is recommended in order to confirm expected results.