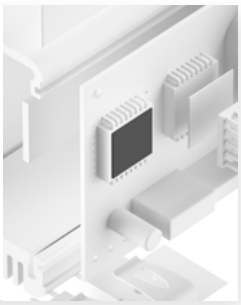
PYROLYTIC GRAPHITE FOIL TFO-V-PG

highly anisotropic conductive

TFO-V-PG consists of pure pyrolytic graphite. Due to the synthetic structure it shows highly anisotropic heat spreading conductivities in-plane (x-y-plane) and in through direction (z-direction). Its flexibility allows for a good compliance to the contact surfaces. Thus the total thermal resistance is minimised. Their low densities make them ideal for applications where low weight is required. The very high temperature resistance allows for the use in extreme hot environments. Due to its high flexibility it is very bending-resistant and mechanically stable. It can be used for curved surfaces and corners because its thermal conductivity will remain unchanged in the absence of sharp folds. The film can be configurated with phase change coating on both sides.



PROPERTIES

- Maximum contact through good surface compliance and high flexibility
- Very low weight
- Silicone-free
- Very high temperature resistance
- EMI-shielding through high electrical conductivity
- Ultra low water absorption

AVAILABILITY

- Sheet 203 x 355 mm (40 µm)
  Sheet 152 x 355 mm (70 / 100 µm)
  or on demand
- Roll 203 mm x 25 m (min.) (40 µm)
  Roll 152 mm x 25 m (min.) (70 / 100 µm)
- Non tacky (TFO-VXXX-PG)
- Tacky (TFO-VXXX-PG-A1)
- Phase change (TPC-VXXX-PG-CB)
- Die cut parts

APPLICATION EXAMPLES

Thermal link of:

- CPUs to heat sinks
- Laser diodes
- TEC modules

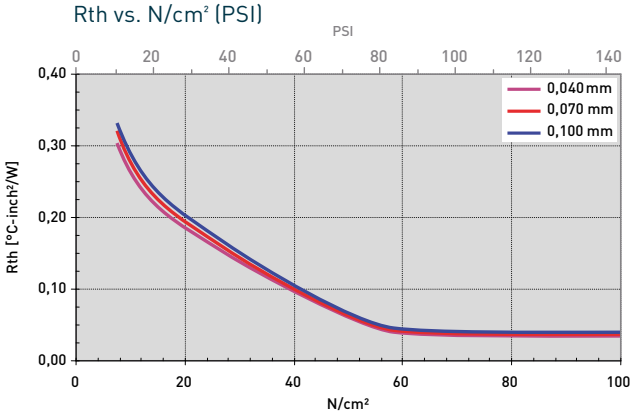
For use in high end computers / Analyzers / Photonics / Heat Pipe Assemblies

PROPERTY	UNIT	TFO-V040-PG	TFO-V070-PG	TFO-V100-PG
MATERIAL		Pyrolytic Graphite	Pyrolytic Graphite	Pyrolytic Graphite
Colour		Grey	Grey	Grey
Thickness	µm	40 ±2	70 ±4	100 ±5
Density	g/cm³	2.0	2.0	2.0
UL Flammability (Equivalent)	UL 94	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
THERMAL				
Resistance¹ @ 150 PSI	°C-inch²/W	0,035	0,037	0,038
Resistance¹ @ 30 PSI	°C-inch²/W	0,190	0,198	0,206
Resistance¹ @ 10 PSI	°C-inch²/W	0,315	0,331	0,343
Thermal Conductivity (Z Direction)	W/mK	6	7	8
Thermal Conductivity (X-Y Direction)	W/mK	1,450	1,400	1,350
Operating Temperature Range	°C	- 250 bis + 500	- 250 bis + 500	- 250 bis + 500
ELECTRICAL				
Electrical Conductivity	S/cm	14,000	14,000	14,000

Measurement technique according to: ¹ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.
Shelf life adhesive: 6 months when stored in original packaging at room temperature and 50% relative humidity.

Thicknesses: 40 µm / 70 µm / 100 µm

Rth vs. N/cm² (PSI)



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