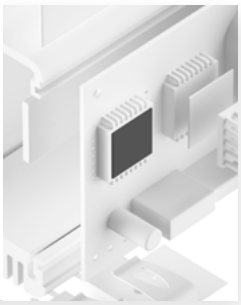
PYROLYTIC GRAPHITE FOIL TFO-Y-PG

highly anisotropic conductive

TFO-Y-PG consists of pure pyroltytic 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 softness 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 flexibility it is bending-resistant. It can be used for curved surfaces and corners because its thermal conductivity will remain unchanged in the absence of sharp folds. Special configurations are dielectric with insulating films or laminated on flexible gap filler elastomers.



Release 05 / 2024

PROPERTIES

- Maximum contact through good surface compliance
- Very low weight
- Silicone-free
- Very high temperature resistance
- EMI-shielding through high electrical conductivity
- UL VO

AVAILABILITY

- Sheet 180 x 230 mm (TFO-YXXX-PG)
- Die cut parts

APPLICATION EXAMPLES

Thermal link of:

- CPUs to heat sinks
- Laser diodes
- TEC modules

For use in high end computers / Analyzers / Photonics

PROPERTY	UNIT	TFO-Y070-PG	TFO-Y100-PG
MATERIAL		Pyrolytic Graphite	Pyrolytic Graphite
Colour		Grey	Grey
Thickness	mm	0.07 ±0.015	0.10 ±0.030
Density	g/cm³	1.21	0.85
UL Flammability	UL 94	V0	V0)
RoHS Conformity	2015 / 863 / EU	Yes	Yes
THERMAL			
Resistance¹ @ 150 PSI	°C-inch²/W	0.04	0,045
Resistance¹ @ 30 PSI	°C-inch²/W	0.07	0,078
Resistance¹ @ 10 PSI	°C-inch²/W	0.09	0,10
Thermal Conductivity (Z Direction)	W/mK	20	25
Thermal Conductivity (X-Y Direction)	W/mK	1,000	700
Operating Temperature Range	°C	- 250 to + 400	- 250 to + 400
ELECTRICAL			
Electrical Conductivity	S/cm	10,000	10,000

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: 0.07 mm / 0.10 mm

Rth vs. N/cm² (PSI)