



# Graphene Assembled Film

## Description:

Graphene assembled Film (GF) is an extremely light weighted and ultra-flexible material up a few hundreds in thicknesses. The outcome film possesses highly crystalline structure and features an anisotropic and overall high thermal conductance. It demonstrates unique functions such as eliminating hot spots, shielding components and reducing skin temperature of electronics devices. It is a remarkable lateral heat spreader for thermal management especially in limited space.

## Features:

- Excellent thermal conductivity (4 times as high as copper)
- Lightweight (1/45 to 1/4 of copper)
- High tensile strength High electrical conductivity
- Customizable thickness (20 $\mu$ m-300 $\mu$ m)
- Ultra-flexible and conformable (Easy to cut)
- Excellent reliability
- RoHS compliant

Model	Thermal conductivity W/m K	Thickness ( $\mu$ m)	Density (g/cm <sup>3</sup> )	Bending durability R5/180°	Specific heat (J/gK)
GF-40	$\geq 1500 \pm 5\%$	40 $\pm 2\%$	2.1 $\pm 0.1$	$\geq 10000$	0.8 $\pm 10\%$
GF-80	$\geq 1500 \pm 5\%$	80 $\pm 2\%$	2.1 $\pm 0.1$	$\geq 10000$	0.8 $\pm 10\%$
GF-100	$\geq 1500 \pm 5\%$	100 $\pm 3\%$	2.1 $\pm 0.1$	$\geq 10000$	0.8 $\pm 10\%$
GF-150	$\geq 1300 \pm 5\%$	150 $\pm 5\%$	2.1 $\pm 0.1$	$\geq 5000$	0.8 $\pm 10\%$
GF-200	$\geq 1100 \pm 5\%$	200 $\pm 5\%$	2.1 $\pm 0.1$	$\geq 5000$	0.8 $\pm 10\%$
GF-300	$\geq 900 \pm 5\%$	300 $\pm 5\%$	2.1 $\pm 0.1$	$\geq 5000$	0.8 $\pm 10\%$

**Smart High Tech**

Arendals Allé 3, SE-418 79 Gothenburg, Sweden

**Email:** [info@smarthightech.com](mailto:info@smarthightech.com)

[www.smarthightech.com](http://www.smarthightech.com)