

Product Datasheet

Graphenea Monolayer Graphene film on various substrates

Graphene Film

Growth Method	CVD synthesis
Transfer Method	Clean transfer method
Quality Control	Optical Microscopy & Raman checked
Appearance (Color)	Transparent
Transparency	>97%
Appearance (Form)	Film
Coverage	>95%
Number of graphene layers	1
Thickness (theoretical)	0.345 nm
Field Effect Mobility on SiO ₂ /Si	2,000 cm ² /V·s
Hall Effect Mobility on SiO ₂ /Si	4,000 cm ² /V·s
Sheet Resistance on SiO ₂ /Si (Van der Pauw)	350±50 Ohms/sq. (1cm x 1cm)
Sheet Resistance PET (Van der Pauw)	580±50 Ohms/sq. (1cm x 1cm)
Sheet Resistance Quartz (Van der Pauw)	370±50 Ohms/sq. (1cm x 1cm)
Grain size	Up to 10 µm

Substrates

	Si	SiO ₂ /Si
Type/Dopant	P/Bor	P/Bor
Orientation	<111>	<100>
Growth Method	CZ	CZ
Resistivity	1-30 ohm cm	<0.005 ohm cm
Thickness	525 +/- 25 µm	525 +/- 20 µm
Front Surface	polished	polished
Back Surface	etched	etched
Flats	2 SEMI	2 SEMI
Coating	--	300 nm thermal oxide on BOTH wafer sides

Cu foil

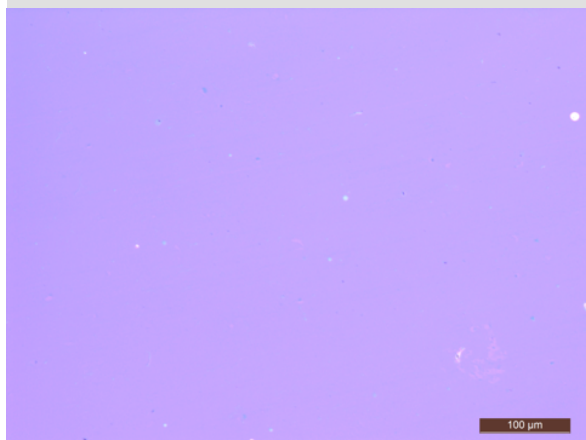
Thickness	18 µm
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Note: Pretreated for easier bottom layer removal

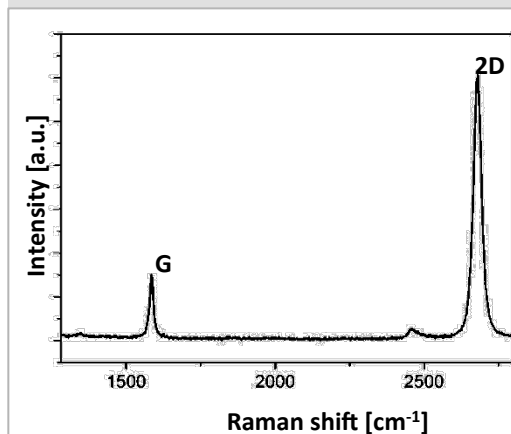
Quartz

Flatness	bow: 20um; Warp: 30um
Roughness	6 Å (polished side)
Polished	Double side polished

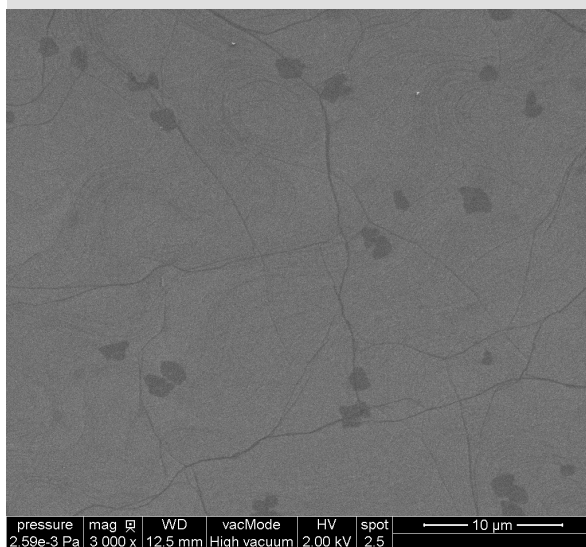
Optical Microscopy



Raman Spectrum



SEM image



HRTEM image

