

Product Data Sheet



C3 Electrode

Carbon Film Based Electrode

Our C3 Electrode is fabricated through a chemical vapor deposition (CVD) process that deposits a highly uniform and pristine carbon film directly onto an alumina substrate.

The CVD process ensures exceptional uniformity and purity of the carbon film across the entire electrode surface. The absence of binder materials or additional components allows for superior solvent compatibility compared to traditional screen-printed carbon electrodes (SPCEs), enabling the C3 Electrodes to be used reliably across a wide range of solvent systems without risk of leaching or degradation.

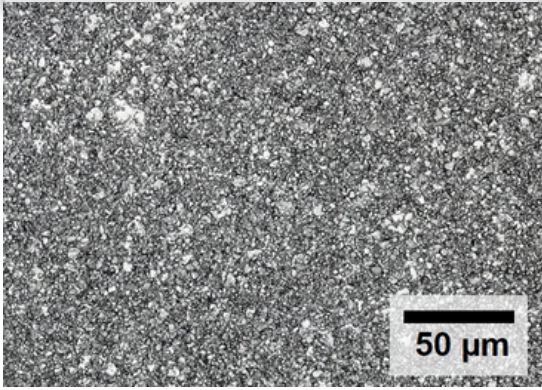
This unique combination of a pure, homogeneous carbon film and high solvent tolerance makes these CVD carbon electrodes an attractive choice for electrochemical measurements, sensing, and other applications requiring exceptional electrode performance and stability in diverse electrolyte environments.

Growth Method	Chemical Vapor Deposition
Quality Control	Raman, SEM, and 4-Point Probe
Dimensions (mm)	10 x 30 x 0.5
Substrate Material	Alumina
Composition (EDS)	> 99% C (No Binders)
Carbon Thickness (µm)	1-5 (Per Request)
Sheet Resistance (ohms/sq)	~ 4.7 ± 2.5**
Surface Area*	0.46 ± 0.02
Conductivity (S/m)	2x10 ⁵
Chemical Stability	High For Most Common Solvents
WE Geometric Area (mm ²)	11.88
Working and Counter Electrode	Pristine Carbon
Reference Electrode	Ag/AgCl

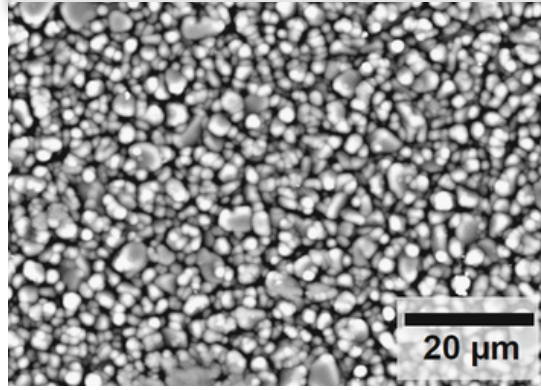
*Percentage of additional surface area, relative to the projected, planar area

**Varies Upon Request of Range of Thickness

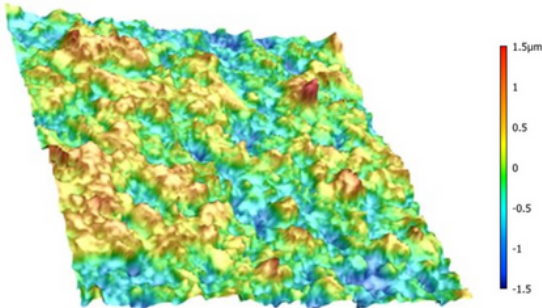
Optical Image of Surface



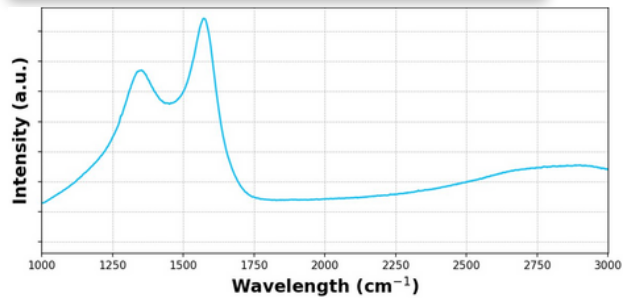
SEM Image



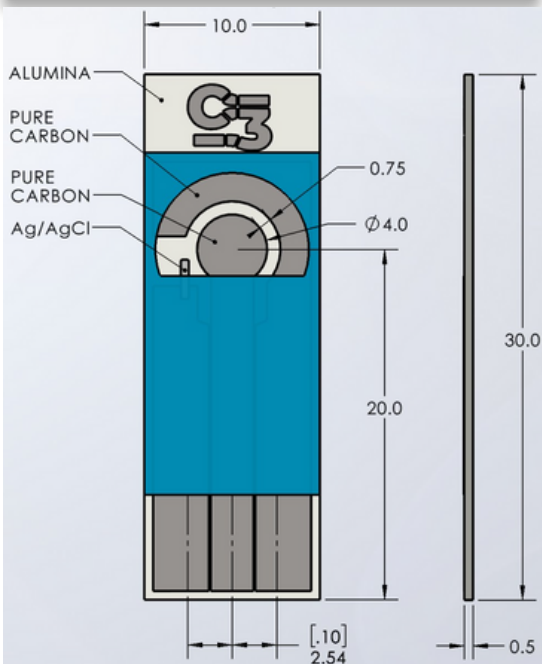
Typical Surface Profile



Raman Spectrum



CAD Rendering



Handling Guide

- C3 electrodes are intended for single-use, disposable sensor applications.
- Store in a dry, room-temperature environment. Always keep the container closed and away from direct sunlight.
- Please avoid touching or contact with the carbon and/or Ag/AgCl surfaces. It is recommended that you handle them with tweezers.

*Electrodes defined from continuous film by tracing

** Custom Electrode Configuration available upon request

Related Products

For more information about the products offered by General Graphene Corporation, please visit www.generalgraphenecorp.com or contact us at sales@generalgraphenecorp.com.