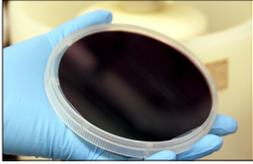


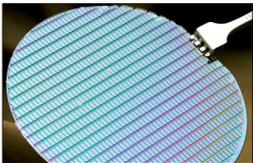
UNCD[®] Standard and Custom Depositions - *A Family of Diamond Materials*
Creating the Next Generation of Diamond-Enabled Electronics and Bio Applications



Diamond, nature's extreme material, is renowned for its incomparable properties such as exceptional hardness, high stiffness, low friction, biocompatibility and outstanding thermal conductivity. For decades designers and engineers have sought to harness the attributes of diamond for a variety of engineering uses, but diamond has been notoriously difficult to work with, prohibitively expensive and without a reliable supply. Advanced Diamond Technologies (ADT), the world leader in development and utilization of diamond films for electronic, mechanical, industrial and biomedical applications, offers several families of high-performance films that exploit the unsurpassed characteristics of diamond.



UNCD Wafers are thin film wafer-scale diamond products used for unique, nano-scale application developments. ADT Wafers offer the ability to create and experiment with the extraordinary properties of diamond using the award winning family of UNCD materials. All ADT Wafers meet a robust set of specifications for thickness and uniformity, wafer bow, and particle counts suitable for direct integration into user applications.



Application	UNCD Attribute
MEMS Devices & RF Electronics	Low Stiction, Electrically Insulating Coatings, Smooth Surface (< 10 nm rms) & High Q, with Depositions Available from 50 nm to 25 μm in UNCD, NCD and MCD
Thermal Management	High Thermal Conductivity & Low Thermal Expansion at High Operating Temperatures
Electrochemical Electrodes, & Membranes for Energy Storage	Corrosion Resistant, Electrically Conductive, & Chemically Resistant
Optical Coatings & Windows of Diamond Thin Film	Wear Resistant, Optical Transparency & Low Thermo-Optic Distortion
Implantable Bio Medical Devices & Sensors	Biocompatibility, Inertness, Anti-Thrombotic and Optional Surface Functionalization
Mass MEMS & CMOS Production Ready (50mm to 300mm Wafers)	Foundry Compatibility, Low Temp Deposition & High Young's Modulus
GaAs / GaN Bonding	Uniformity < 10% & Smooth Surface

Our customers' applications matter most, and ADT has extended its expertise in applying a fully customizable diamond film to fit customer size, shape, performance, and substrate compositions.

With the advances brought about by UNCD, diamond material can now be considered by engineers during the design phase, to enable entirely new classes of products and applications.

Let's work together to solve the world's hardest problems.