

Cr2016 X Ray Analysis Coin Cell Case With Single Window For In Situ Xrd Testing

Item Number: FZ07



Introduction

Enhance your battery research with our premium CR2016 X-ray analysis coin cell case featuring a durable single Kapton window and protective aluminum coating, engineered for accurate in situ XRD characterization and high-precision electrochemical phase observation across demanding research workflows.

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Application	Description	Key Benefit
In Situ Cathode Phase Transition Analysis	Real-time monitoring of structural phase changes and lattice volume shifts in high-nickel NMC, LFP, and cobalt-free cathodes during high-voltage cycling.	High-fidelity diffraction signal with zero chemical interference from the coated positive can.
Operando Synchrotron & Lab XRD Studies	Dynamic structural investigation using high-intensity synchrotron radiation or laboratory diffractometers under continuous electrochemical load.	Exceptional 0.18 mm Kapton beam transmission with minimal background noise.
Solid-State Battery Interface Dynamics	Characterization of solid electrolyte-electrode interface stability and chemomechanical degradation during cycling.	Rigid single-window architecture maintains uniform stack pressure without puncturing.
Anode Intercalation Mechanism Research	Structural tracking of graphite, silicon-graphite composites, and conversion-type anodes during initial lithiation and de-lithiation.	Hermetic containment prevents ambient air or moisture ingress during multi-hour scans.
Sodium-Ion & Multivalent Battery R&D	In situ investigation of novel host materials for Na-ion, K-ion, and Zn-ion chemistries under variable current densities.	Robust corrosion resistance via specialized internal surface treatment and passivated layers.
Thermal & Electrochemical Stress Testing	Coupled analysis of crystallographic stability under simultaneous thermal exposure and continuous cycling.	Thermally resilient polyimide film preserves dimensional stability and cell sealing up to elevated test limits.

Specification Parameter	Value / Characteristic
Product Item Number	FZ07
Configuration Type	Single-Sided Window (XRD Analysis)
Casing Standard Size	CR2016
Outer Diameter	20.0 mm
Total Casing Height	1.6 mm
X-Ray Window Membrane Material	Polyimide (Kapton) Film
Window Membrane Thickness	0.18 mm
Positive Shell Internal Surface Coating	High-Purity Aluminum Coating
Aluminum Coating Thickness	< 0.01 mm
Total Approximate Weight	0.25 oz (7.0 g)
Intended Primary Application	In Situ / Operando X-Ray Diffraction (XRD) Material Analysis
Sealing Compatibility	Standard Hydraulic and Electric Coin Cell Crimpers