DATASHEET

Solid-State Battery Three-Electrode Test Mold | Compact

Three-electrode split cell with an integrated reference electrode for independent potential monitoring — purpose-built for all-solid-state battery mechanism and interface diagnostics.

APPLICATION

All-solid-state battery assembly & testing, lithium-metal anode interface research, sulfide/oxide/polymer electrolyte evaluation, in-situ EIS, and long-term cycling.

KEY SPECS

- Material (Core): PEEK
- Plunger Material: Die Steel
- Outer Dimensions: φ78 × H105 mm
- Working Cavity Diameter: 10 mm

1. Specifications

Material (Core)	PEEK
Plunger Material	Die Steel
Outer Dimensions	φ78 × H105 mm
Working Cavity Diameter	10 mm
Max Stack Force	5 T
Max Pressure	500 MPa
Max Operating Temperature	200 °C
Screw Head Diameter	36 mm
Electrode Configuration	Working / Counter / Reference

2. Product Details

This is a compact three-electrode test cell purpose-built for all-solid-state battery mechanism studies. Unlike conventional two-electrode split cells, the MOL1D100A integrates a **third reference electrode**, enabling researchers to independently monitor working-electrode and counter-electrode potentials during cycling — critical for deconvoluting interfacial side reactions, impedance evolution, and failure mechanisms.

The PEEK inner core delivers excellent electrical insulation, chemical resistance, and mechanical stability up to 200 °C, while die-steel plungers and the locking cap maintain reliable solid–solid contact at 5 T of stack pressure. **The standard configuration supports up to 500 MPa**; a 1000 MPa version is available as a custom option on request.

With an overall footprint of φ78 mm × H105 mm and a φ10 mm working cavity (customizable from 5–20 mm), the split-cell design enables quick assembly, disassembly, and electrode replacement — ideal for routine operation inside a glovebox.

3. Order / Quote

Model	Pack Size	Availability
DLK-TB-500-MPA	500 MPa	Made to order (quote)

Current pricing and ordering: labcorematerials.com/products/labcore-solid-state-three-electrode-mold/

Contact

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www.labcorematerials.com/products/labcore-solid-state-three-electrode-mold/