

4Mm Wide Aluminum Battery Tabs For Pouch Cell Current Collection

Item Number: CL35



Introduction

Engineered for precision battery R&D, this 4mm wide high purity aluminum tab delivers superior electrical conductivity, low contact resistance, and exceptional ultrasonic weldability for reliable pouch cell fabrication, advanced electrochemical testing, and prototyping workflows.

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Application	Description	Key Benefit
Lithium-ion Pouch Cell Cathode Lead	Serves as the primary positive terminal conductor welded directly to multi-layered aluminum current collector foils.	Ensures ultra-low contact resistance and prevents localized heating at high charge and discharge rates.
Solid-State Battery R&D	Integrates into prototype solid-state pouch cells operating with advanced solid electrolytes and high-voltage cathodes.	High-purity 99.99% aluminum prevents trace metal contamination and interface breakdown under high operating voltages.
Supercapacitor Current Extraction	Connects internal electrode stacks to external power terminals in high-power electric double-layer capacitors (EDLCs).	Rapid electron transport properties support swift discharge cycles and minimize internal equivalent series resistance (ESR).
Sodium-ion Cell Prototyping	Utilized as the positive terminal lead for emerging sodium-ion chemistry pouch cells utilizing aluminum cathode substrates.	Chemical compatibility with emerging non-aqueous electrolytes ensures structural stability without dissolution.
Electrochemical Impedance Spectroscopy	Provides a standardized, highly reproducible electrical connection for precision impedance and rate-capability diagnostics.	Eliminates artifact resistance and noise in frequency response data, boosting academic and R&D data repeatability.
Battery Pilot Line Pre-Production	Applied in semi-automated pouch cell assembly lines for pilot-scale cell qualification and process optimization.	Uniform dimensional tolerances facilitate repeatable robotic pick-and-place and ultrasonic welding parameters.

Parameter	Specification (Item No: CL35)
Substrate Material	High-Purity Aluminum (Al)
Material Purity	99.99%
Standard Width	4.0 mm (Customizable upon request)
Standard Length	48.0 mm (Customizable upon request)
Material Thickness	0.10 mm (100 μ m)
Maximum Current Carrying Capacity	3.0 A
Net Weight per Piece	Approx. 60 mg (0.060 g)
Electrical Conductivity	High-conductivity grade (IACS compliant)
Terminal Polarity Compatibility	Positive Terminal (Cathode / Current Collector)
Recommended Bonding Technique	Ultrasonic Metal Welding (Al-to-Al foil)
Sealing Compatibility	Suitable for thermal sealing with polymer pouch laminate films
Customization Options	Extended length, tailored width, pre-applied sealant film options