Nickel Tab And Nickel Sheet Battery Current Collectors For Lithium Polymer Pouch Cells

Item Number: FZ38

Introduction

Engineered nickel tab and nickel sheet components deliver low electrical resistance, superior weldability, and hermetic thermal sealing for lithium polymer pouch cell battery anodes. Available in precision thicknesses, versatile widths, and multiple sealant film color options for cell packaging.

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Application	Description	Key Benefit
Electric Vehicle (EV) Pouch Cells	Large-format pouch cell terminal connections requiring robust continuous current carrying capacity.	Minimized thermal buildup and exceptional joint reliability under dynamic vibration.
Consumer Electronics Polymer Cells	Ultrathin lithium polymer batteries for smartphones, laptops, tablets, and wearable electronics.	Ultra-compact 0.1 mm profile maximizes gravimetric energy density and space utilization.
Energy Storage Systems (ESS)	High-capacity stationary pouch cells assembled into grid-scale battery energy storage modules.	Long-term chemical resistance and anti-oxidation stability over multi-year operational cycles.
High-Rate Drone & RC Battery Packs	High-discharge LiPo battery packs demanding minimal internal resistance during burst discharge.	Reduced voltage drop and maximum power delivery through optional nickel-copper configurations.
Solid-State Battery R&D	Experimental cell prototyping utilizing novel solid electrolytes and pouch encapsulation methods.	High dimensional reproducibility and clean surface chemistry for accurate laboratory testing.
Medical Device Power Packs	Highly reliable hermetic battery cells for implantable, diagnostic, and portable medical hardware.	Zero-defect hermetic bonding prevents electrolyte seepage and maintains sterile integrity.
Automated Cell Assembly Lines	High-throughput roll-to-roll or pre-cut pouch cell tab welding and thermal packaging workflows.	Consistent mechanical flatness and burr-free edges eliminate feeder jamming and downtime.

Parameter	FZ38-Ni-S Series (Narrow Profile)	FZ38-Ni-L Series (Wide Profile)	FZ38-NiCu Hybrid Series
Primary Substrate Material	High-Purity Nickel (Ni)	High-Purity Nickel (Ni)	Nickel-Clad Copper (Ni-Cu)
Terminal Polarity Compatibility	Anode / Negative Terminal	Anode / Negative Terminal	Anode / Negative Terminal
Width Range	2.0 mm – 25.0 mm	≥ 25.0 mm	2.0 mm – ≥ 25.0 mm
Thickness Options	0.1 mm / 0.2 mm	0.2 mm	0.1 mm / 0.2 mm
Sealant Tape Color Options	White / Yellow / Black	White / Yellow / Black	White / Yellow / Black
Sealant Film Compatibility	Cast Polypropylene (CPP) / Aluminum Laminated Film	Cast Polypropylene (CPP) / Aluminum Laminated Film	Cast Polypropylene (CPP) / Aluminum Laminated Film
Heat Sealing Temperature Range	165°C – 195°C	165°C – 195°C	165°C – 195°C
Electrical Resistivity (Substrate)	~6.99 μΩ·cm (Pure Ni)	~6.99 μΩ·cm (Pure Ni)	Low Equivalent Resistivity (Composite)
Tensile Strength	≥ 400 MPa	≥ 400 MPa	≥ 350 MPa

Parameter	FZ38-Ni-S Series (Narrow Profile)	FZ38-Ni-L Series (Wide Profile)	FZ38-NiCu Hybrid Series
Elongation at Break	≥ 15%	≥ 15%	≥ 20%
Edge Quality	Precision slit, burr-free (< 5 μm)	Precision slit, burr-free (< 5 μm)	Precision slit, burr-free (< 5 μm)
Surface Condition	Degreased, uniform rolling luster, oxidation-free	Degreased, uniform rolling luster, oxidation-free	Degreased, uniform rolling luster, oxidation-free