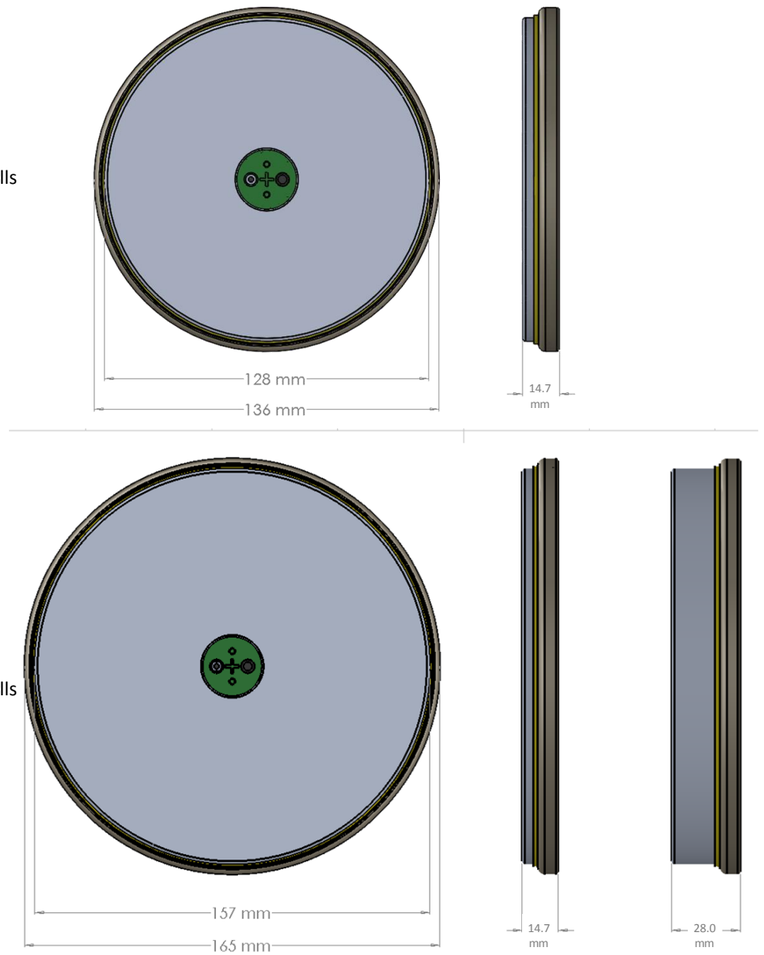
Rolled-Ribbon Li-ion LFP Cells

Dimensional Characteristics

136mm Cells



165mm Cells

Don’t see what you need?

Rolled-Ribbon cells can be made in custom sizes using custom LFP, NMC, LTO, NCA, LMO, LCO or other electrochemical formulations. Please contact the Rolled-Ribbon Battery Company for assistance with custom cell requirements.

Rolled-Ribbon® Li-ion LFP Cells

Rolled-Ribbon is the NEW CELL STANDARD for high-power high-capacity Li-ion batteries. Its unique design provides superior performance and value.

Rolled-Ribbon solves the longstanding industry problems associated with conventional cells (cylindrical, pouch and prismatic) for high-power high-capacity applications. Conventional cells do not scale up well for increasing power and capacity. As battery system power and capacity requirements increase, significant power and thermal issues emerge that are difficult to solve, resulting in decreased battery system performance and increased cost. Rolled-Ribbon overcomes these problems. In tests that compare Rolled-Ribbon and conventional cells on a side-by-side basis using diverse but identical electrochemical formulations, Rolled-Ribbon cells outperform conventional cells by wide margins. The Rolled-Ribbon cell performance advantages come from their physical structures and not their electrochemical formulations. BETTER CELLS … BETTER BATTERIES!

Rolled-Ribbon Advantages

- **Maximum Power Delivery**
- **Minimum Heat Generation**
- **Unparalleled Thermal Performance**
- **Maximum Cycle Life**
- **Maximum Conversion Efficiency**
- **Rugged, Durable Construction**

Applications

- **Industrial Equipment**
- **Utility Vehicles**
- **Electric Vehicles**
- **Marine Vessels**
- **Transportable Power Systems**
- **Microgrids – Grid Energy Storage**
- **Uninterruptible Power Systems**

Rolled-Ribbon BATTERY COMPANY

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Rolled-Ribbon Li-ion LFP Cells

Characteristic/Model	Units	136-15	165-15	165-28
Li-ion Formulation		LFPE	LFPE	LFPE
Nominal Voltage	V	3.20	3.20	3.20
Capacity (@23°C, 1C)				
Coulombic	Ah	15	22	45
Energy	Wh	48	70	144
Voltage Range	V	2.50-3.65	2.50-3.65	2.50-3.65
Ambient Operating Temperatures				
Discharging	°C		-20 to +45	
Charging	°C		0 to +45	
Storage	°C		-20 to +45	
Discharging Characteristics (@23°C)				
Standard (1C)	A	15	22	45
Maximum Continuous (5C)	A	75	110	225
Peak < 15 sec (10C)	A	150	220	450
Charging Characteristics (@23°C)				
Charge Mode		Constant Current – Constant Voltage		
Standard (1C)	A	15	22	45
Maximum Continuous (2C)	A	30	44	90
Peak < 15 sec (4C)	A	60	88	180
Power/Energy (@23°C)				
Peak Power (10C)	W	480	704	1,440
Volumetric Densities				
Standard Energy (1C)	Wh/L	230	227	246
Standard Power (1C)	W/L	230	227	246
Peak Power (10C)	W/L	2,297	2,286	2,457
Gravimetric Densities				
Standard Energy (1C)	Wh/kg	107	100	120
Standard Power (1C)	W/kg	107	100	120
Peak Power (10C)	W/kg	1,067	1,006	1,200
DCIR (@50% DOD, @23°C)	mΩ	< 1.8	< 1.2	< 0.6
Cycle Life				
1C/1C, 100% DOD		> 2,000	> 2,000	> 2,000
1C/1C, 80% DOD		> 3,000	> 3,000	> 3,000
Physical Characteristics				
Nominal Dimensions	mm	136 x 15	165 x 15	165 x 28
Terminal Area	cm^2	125	189	189
Cell Volume	cm^3	209	308	586
Cell Weight	g	450	700	1,200

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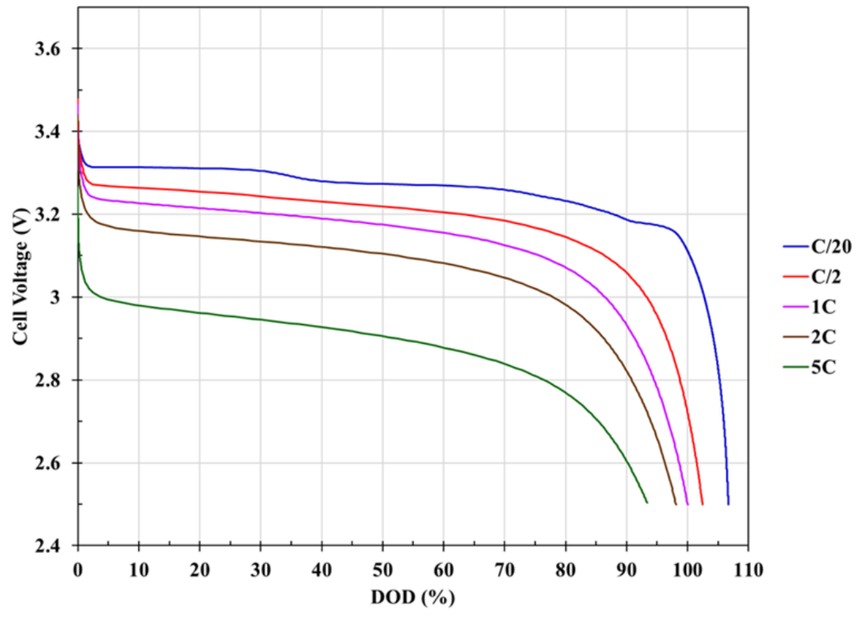
Discharge Characteristics: 165-28 size C-rate CC Discharge to 2.5V Cut-off, @ 23°C



Charge Characteristics: 165-28 size C-rate CC-CV Charge to 3.65V and C/30 Cut-off, @ 23°C