

136-XX-LFPE04A  
SERIES

# Rolled-Ribbon® Li-ion Cells



## 136-XX-LFPE04A

## XX=15

## XX=28

## ROLLED-RIBBON® ADVANTAGE

Nominal Dimensions (D x H)	136 x 15 mm	136 x 28 mm
Li-ion Electrochemical Formulation	LFP	LFP
Nominal Voltage, Capacity (@ +23°C, 1C)	3.20 V, 15 Ah	3.20 V, 31 Ah
Energy Capacity (@ +23°C, 1C)	48 Wh	99 Wh
Voltage Range	2.20-3.65 V	2.20-3.65 V
Charging:		
Charge Mode	CC/CV	CC/CV
Standard (@ +23°C, 1C)	15 A	31 A
Maximum Continuous (@ +23°C, 2C)	30 A	62 A
Peak < 15 sec (@ +23°C, 4C)	60 A	124 A
Temperature Range	0°C to +45°C	0°C to +45°C
Discharging:		
Standard (@ +23°C, 1C)	15 A	31 A
Maximum Continuous (@ +23°C, 5C)	75 A	155 A
Peak < 15 sec (@ +23°C, 10C)	150 A	310 A
Temperature Range	-20°C to +45°C	-20°C to +45°C
Power/Energy:		
Peak Power (@ +23°C, 10C)	448 W	960 W
Energy Density (@ +23°C, 1C)	223 Wh/L	245 Wh/L
Energy Density (@ +23°C, 1C)	107 Wh/kg	125 Wh/kg
Standard Power Density (@ +23°C, 1C)	223 W/L	245 W/L
Standard Power Density (@ +23°C, 1C)	107 W/kg	125 W/kg
Peak Power Density (@ +23°C, 10C)	2,083 W/L	2,376 W/L
Peak Power Density (@ +23°C, 10C)	1,006 W/kg	1,215 W/kg
Impedance:		
AC Impedance @ 1kHz	< 1.00 mΩ	< 0.50 mΩ
DCIR (@ +23°C, 50% DOD)	< 3.00 mΩ	< 1.50 mΩ
Cycle Life:		
@ +23°C, 1C/1C, 100% DOD	2,000+	2,000+
@ +23°C, 1C/1C, 80% DOD	4,000+	4,000+
Miscellaneous:		
Terminal Area	125 cm <sup>2</sup>	125 cm <sup>2</sup>
Cell Volume	215 mL	404 mL
Cell Weight	445 g	790 g
Atmospheric Pressure Operating Range	86 -106 kPa	86 -106 kPa

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

## APPLICATIONS

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

*Don't see what you want?*

*Rolled-Ribbon® cells can be made in custom sizes with custom LFP, LMO, NMC, NCA, LCO and LTO electrochemical formulations.*



14141 W. Highway 290, Building #400  
Austin, TX 78737 USA  
+1 (512) 387-2553

info@rolled-ribbon.com

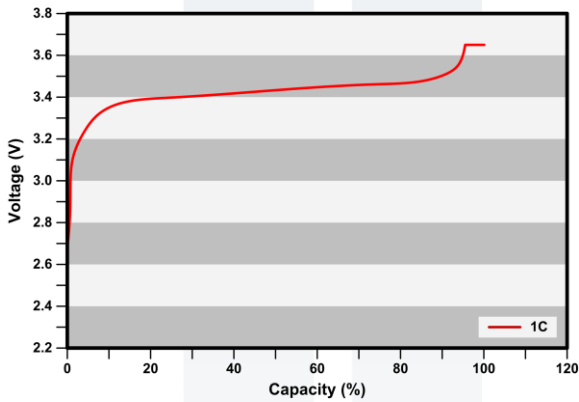
www.rolled-ribbon.com

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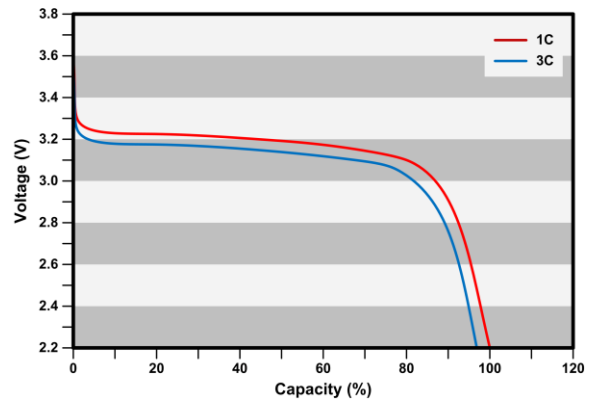
## Charge Characteristics

**Charge @ +23°C: CC/CV, 1C, 3.65V, 0.05C Cut-Off**



## Discharge Characteristics

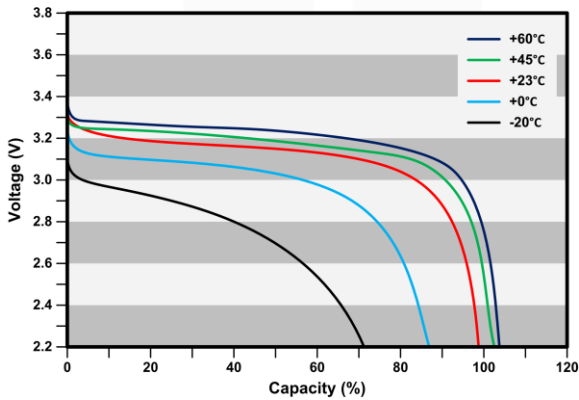
**Discharge @ +23°C: CC, 1C & 3C, 2.20V Cut-Off**



## Temperature Characteristics

**Charge @ +23°C: CC/CV, 1C, 3.65V, 0.05C Cut-Off**

**Discharge @ -20°C to +60°C: CC, 1C, 2.20V Cut-Off**



## Mechanical Characteristics

