



UHP461200 LFP 14

14 Ah LFP Lithium Ion Battery Cell

Ultra-High Power Cell
3.2 V / 44.8 Wh

The lithium iron phosphate battery cell **UHP461200 LFP 14** is ideally suited for applications requiring ultra-high power density, ultra-high charge and discharge rates and very safe operation.

Features and Benefits

- ▲ Ultra-high power
- ▲ Safe LFP chemistry
- ▲ Continuously tabbed design
- ▲ Aluminum housing with good cooling properties
- ▲ Low resistance
- ▲ Made in Germany
- ▲ 100 % European supply chain
- ▲ Suitable for low temperature operation
- ▲ Standardized cell format
- ▲ UN 38.3 certification planned for Q1/2027

Mechanical Characteristics

Diameter	46	mm
Length	121.8	mm
Length without terminals	120.0	mm
Weight	420	g
Volume	200	ml

Chemical Characteristics

Cathode	Lithium Iron Phosphate (LFP)
Anode	Graphite

Electrical Characteristics

Maximum capacity @ 1 C @ 25 ° C	15	Ah
Nominal capacity @ 1 C @ 25 ° C	14	Ah
Nominal operating voltage	3.2	V
Charging voltage	3.5	V
Recommended cut-off discharge voltage	2.5	V
Energy	44.8	Wh
Discharge current @ 25 ° C		
Recommended	28	A (2 C)
Maximum continuous	490	A (35 C)
Maximum pulse (2 s)	1,400	A (100 C)
Low temperature performance	See Chart	
AC impedance (1 kHz)	< 0.5	mΩ
DC resistance (2 s pulse @ 20 C / 50 % SoC)	< 1.2	mΩ
Specific energy	106	Wh/kg
Energy density	224	Wh/l
Specific power		
Continuous discharge @ 35 C / 50 % SoC	2,960	W/kg
2 s pulse discharge @ 100 C / 50 % SoC	7,390	W/kg
Power density		
Continuous discharge @ 35 C / 50 % SoC	6,220	W/l
2 s pulse discharge @ 100 C / 50 % SoC	15,520	W/l

Applications and Markets

- ▲ Hybrid Electric Drives
- ▲ Electric Drives
- ▲ Load Leveling & Peak Shaving
- ▲ Boosting & Range Extension
- ▲ Space
- ▲ Aerospace
- ▲ Defense
- ▲ Marine
- ▲ Heavy Duty Vehicles
- ▲ Off-Road Vehicles
- ▲ Rail and Transport
- ▲ Mining

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Operating Conditions

Recommended charging method	Constant Current/ Constant Voltage
Recommended charging voltage	3.5 V (max. 3.6 V)
Recommended continuous charging current	14 A (1 C)
Maximum continuous charging current	210 A (15 C)
Maximum pulse charge current (15 s)	280 A (20 C)
Absolute lower voltage limit for discharge	
Continuous @ 35 °C (-40 °C to 60 °C)	2.0 V
Pulse @ 100 °C (-40 °C to 60 °C)	1.5 V
Storage and transport conditions	25 to 50 % SoC
Maximum temperature range	-40 °C to 60 °C
Recommended temperature range	10 °C to 25 °C
Operating temperature	
Discharge	-40 °C to 60 °C
Charge (recommended)	-25 °C to 40 °C
Cycle life @ 20 °C (EoL @ 80 % of nominal capacity)	
100 % DoD, 2 C	> 5,000 cycles
80 % DoD, 2 C	> 6,000 cycles
100 % DoD, 5 C	> 2,400 cycles
80 % DoD, 5 C	> 3,000 cycles

