Engineering Data Sheet

V4SMART
German battery expertise since 1887

V21700 UHP-26

Key Features

- In Series production with Automotive standard
- NMC622/Graphite Chemistry
- Very low resistance
- Best-in-class power capability
- Long cycle life
- Wide temperature range
- Fast charge capability
- Excellent efficiency

No.	Item	Value	Unit
1	Nominal voltage; U_{Nom}= $Energy_{Dch}$/$Capacity_{Dch}$	3.7	V
2	Standard charge CC-CV, 4.2V/1C, cut-off @0.05C	4.2	V
3	Fast charge*; CC, 4.2V/8C to 80%SOC, >25°C, BOL	< 6	Min
4	Operating temperature Note: reduced charging rate up to 15°C	-25 to +65	°C
5.1	Std. Capacity CN; std. charge@25°C discharge 0.2C to 2.5V	2.6	Ah
5.2	Std. Capacity CN; std. charge@25°C discharge 1C to 2.5V	2.57	Ah
6	Typical 14C discharge capacity @25°C to 2.5V cut-off voltage	95	%CN
7	Internal resistance DCIR, 30%SOC, 10s, 10A @23°C; Cap-to-Bottom	8.6	mOhm
8	Internal resistance DCIR, 30%SOC, 10s, 10A @23°C; Shoulder-to-Cap	9.26-10.66	mOhm
9	ACIR (AC 1 kHz), 30%SOC @23°C; Shoulder-to-Cap	< 5.2	mOhm
10	Max. charge current (cont.) CC-CV, 4.2V cut-off @0.05C cont. > 25°C BOL	25	A
11	Max. charge current (pulse)* @50%SOC and 25°C (< Umax after 10s)	50	A
12	Max. discharge current (cont.) @25°C to Tmax-operation	100	A
13	Max. discharge current (pulse)* 5s @30%SOC and -25°C with U > 2 V	10	A
14	Cycle life 1C/1C 0-100%DOD, @25°C, >= 80%SOH	> 2,500	cycle
15	Cycle life 1C/1C 0-100%DOD, @45°C, >= 80%SOH	> 1,600	cycle
16	Cycle life 1C/31.5W 30-90%DOD, @-10°C, >= 80%SOH	> 2,000	cycle
17	Cycle life 31.5W/31.5W 30-90%DOD, @45°C, >= 80%SOH	> 3,600	cycle
18	Weight ± 2 g with or without insulation tube	68 ± 2	g
19	Volume	0.024	L
20	Max. Stored energy	9.52	Wh
21	Max. Gravimetric power density	~ 3,000	W/kg
22	Max. Volumetric power density	~ 8,420	W/L
23	Gravimetric energy density	~ 140	Wh/kg
24	Volumetric energy density	~ 400	Wh/L

*All the measurements for pulse power and fast charge are performed in free convection in temperature chamber. No cooling applied!

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