

Illustrative render generated from published specifications

18 x 49 mm
35 g

Vapcell 18500

Vapcell · released 2018

18500 LCO MOOCH-TESTED · 5 A



Live page & updates

2,000 mAh CAPACITY	5 A MOOCH CONTINUOUS	3.6 V NOMINAL · 2.5 – 4.2 V	7.2 Wh ENERGY · 205.71 WH/KG
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REFERENCE ONLY — NOT AN OFFICIAL DOCUMENT

This information is gathered from multiple sources, including manufacturer datasheets, independent third-party testing, and community contributions. Cell specifications vary between production batches and change over time, and no figure here is guaranteed to be correct or current. **Always consult the manufacturer's spec sheet directly.** Use this sheet for reference only — never as the sole basis for a safety-critical decision about charging, discharging, or assembling cells. The cell image is an illustrative render generated from published specifications, not a photograph.

CAPACITY AMONG 18500S #1 of 3 Lowest in database Highest More capacity than 100% of 18500 cells in our database, but lower discharge than average.	VOLTAGE OPERATING WINDOW 1.7 V usable Cutoff 2.5 V Nominal 3.6 V Max 4.2 V Below nominal the cell sags fast under load; above it, the last of the capacity fills slowly on the constant-voltage taper.
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APPLICATION SUITABILITY

Rule-of-thumb ratings from this cell's capacity and continuous discharge. Check your own load before committing.

Powerwalls	Usable for powerwalls but lower capacity means you'll need more cells to hit your target kWh.
Ebike packs	Marginal. Check your motor's peak draw first. You might get voltage sag under load.
Car audio	Not enough discharge for car audio amplifiers. You need at least 15-20A continuous for most setups.
High-drain vaping	Below the 25A Mooch CDR threshold that high-drain vaping needs. Use a higher-drain cell.
Flashlights	Lower capacity means shorter runtime. Better cells are available for flashlight use.
Power tools	Not enough discharge or capacity for power tool use.

IDENTITY		PHYSICAL	
Manufacturer	Vapcell	Diameter	18 mm
Model	18500	Length	49 mm
Format	18500	Weight	35 g
Chemistry	LCO	ELECTRICAL	
Year released	2018	Rated capacity	2,000 mAh
Wrap colour	■ Green	Nominal voltage	3.6 V
Terminal	Flat top	Max charge voltage	4.2 V
Protection	Unprotected	Discharge cutoff	2.5 V
OPERATING TEMPERATURE		Energy	7.2 Wh
Charging	0°C to 45°C	Internal resistance	50 mΩ
Discharging	-20°C to 75°C	Max continuous discharge	5 A (mooch)
ENERGY & POWER DENSITY		Discharge C-rate	2.5C
Energy	7.2 Wh	Standard charge current	1,000 mA
Specific energy	205.71 Wh/kg	Typical charge time	2 h
Volumetric density	577.43 Wh/L		
Power density (mass)	514 W/kg		
Power density (volume)	1,444 W/L		
Capacity ranking	#1 of 3 18500s		
C-RATE CONVERSION · 2,000 MAH			
C-RATE	CURRENT	THEORETICAL RUNTIME	
0.2C	0.4 A	5h 00m	
0.5C	1 A	2h 00m	
1C	2 A	1h 00m	
2C	4 A	30m	

Highlighted row is closest to the rated 5 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,000 mA	~2h 00m
1C	2,000 mA	~1h 00m

Constant-current phase only. Real charge time runs longer because of the constant-voltage taper at the end.

SERIES PACK CONFIGURATIONS

Voltages calculated from this cell's own nominal and maximum charge voltage. The 3P columns show one common parallel count as a worked example — scale the parallel group to the capacity you need.

SERIES	NOMINAL	FULLY CHARGED	CELLS AT 3P	CAPACITY	ENERGY
3S	10.8 V	12.6 V	9	6 Ah	65 Wh
7S	25.2 V	29.4 V	21	6 Ah	151 Wh
10S	36 V	42 V	30	6 Ah	216 Wh
13S	46.8 V	54.6 V	39	6 Ah	281 Wh
14S	50.4 V	58.8 V	42	6 Ah	302 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 4,000 mAh · 101 Wh 10 A max · ≈0.49 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 8,000 mAh · 374 Wh 20 A max · ≈1.82 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 8,000 mAh · 461 Wh 20 A max · ≈2.24 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 12,000 mAh · 173 Wh 30 A max · ≈0.84 kg cells
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HANDLING & SAFETY

- Never charge above 4.2V or discharge below 2.5V.
- Store cells at around 3.6-3.8V (roughly 40-60% charge) for long-term storage.
- Don't mix cells with different capacities, chemistries, or states of charge in a pack.
- Inspect wraps before use. A torn wrap can cause a short circuit.
- Always use a BMS or balance charger appropriate for your pack configuration.
- Keep cells away from metal objects, keys, and coins. A short across the terminals can cause fire.

SOURCES & FURTHER READING

Cell Saviors page

cellsaviors.com/cell-database/vapcell-18500

Manufacturer datasheet	https://www.vapcelltech.com/h-pd-48.html
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-v...
Full cell database	cellsaviors.com/cell-database