

Illustrative render generated from published specifications

Sony VTC4A

Sony · released 2018

18650 NMC

MOOCH-TESTED · 25 A



Live page & updates

2,000 mAh CAPACITY	25 A MOOCH CONTINUOUS	3.6 V NOMINAL · 2.5 – 4.2 V	7.2 Wh ENERGY
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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 18650S #221 of 279 Lowest in databaseHighest Higher discharge than 84% of 18650 cells in our database. Great for high-drain builds.	VOLTAGE OPERATING WINDOW 1.7 V usable Cutoff 2.5 VNominal 3.6 VMax 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	Enough discharge to handle amplifier bursts without voltage sag.
High-drain vaping	Above the 25A Mooch CDR threshold. Suitable for regulated and mechanical mods.
Flashlights	Lower capacity means shorter runtime. Better cells are available for flashlight use.
Power tools	Sufficient discharge and capacity for most power tool packs.

IDENTITY		ELECTRICAL	
Manufacturer	Sony	Rated capacity	2,000 mAh
Model	VTC4A	Nominal voltage	3.6 V
Format	18650	Max charge voltage	4.2 V
Chemistry	NMC	Discharge cutoff	2.5 V
Year released	2018	Energy	7.2 Wh
Terminal	Flat top	Max continuous discharge	25 A (mooch)
Protection	Unprotected	Discharge C-rate	12.5C
OPERATING TEMPERATURE		Standard charge current	2,000 mA
Charging	0°C to 45°C	Typical charge time	1 h
Discharging	-20°C to 75°C	ENERGY & POWER DENSITY	
		Energy	7.2 Wh
		Capacity ranking	#221 of 279 18650s

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
3C	6 A	20m
5C	10 A	12m
8C	16 A	7m 30s
10C	20 A	6m

Highlighted row is closest to the rated 25 A continuous discharge.

CHARGING

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

1C2,000 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 50 A max	13S4P 48V ebike standard 52 cells · 46.8 V 8,000 mAh · 374 Wh 100 A max	16S4P DIY powerwall 64 cells · 57.6 V 8,000 mAh · 461 Wh 100 A max	4S6P Power tool replacement 24 cells · 14.4 V 12,000 mAh · 173 Wh 150 A max
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SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Sony VTC4A (this cell)	2,000	25 A	7.2	—	—
LG LGDBHE21865	2,500	20 A	9.3	48 g	193
Sanyo UR18650F	2,500	5 A	9.3	47 g	197
Sanyo UR18650FM	2,500	5 A	9.3	47 g	197
BAK N18650COP	2,500	30 A	9	47 g	191
BAK N18650NCP	2,500	30 A	9	47 g	191

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/sony-vtc4a
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-s...
Full cell database	cellsaviors.com/cell-database