

Illustrative render generated from published specifications

18.5 × 65.25 mm
46.7 g

Murata VTC5D

Murata · released 2018

18650 NMC

MOOCH-TESTED · 35 A



Live page & updates

2,700 mAh CAPACITY	35 A MOOCH CONTINUOUS	3.6 V NOMINAL · 2 – 4.2 V	9.72 Wh ENERGY · 208.14 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 18650S #92 of 279 Lowest in database Highest Higher discharge than 94% of 18650 cells in our database. Great for high-drain builds.	VOLTAGE OPERATING WINDOW 2.2 V usable Cutoff 2 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	High capacity means more stored energy per cell. Fewer cells needed for a given kWh target.
Ebike packs	Good balance of capacity for range and discharge for hills. Works well in most ebike packs.
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	Decent runtime. Works well for most flashlights.
Power tools	Sufficient discharge and capacity for most power tool packs.

IDENTITY

Manufacturer	Murata
Model	VTC5D
Format	18650
Chemistry	NMC
Year released	2018
Wrap colour	■ Green
Terminal	Flat top
Protection	Unprotected

OPERATING TEMPERATURE

Charging	0°C to 60°C
Discharging	-20°C to 60°C

ENERGY & POWER DENSITY

Energy	9.72 Wh
Specific energy	208.14 Wh/kg
Volumetric density	554.18 Wh/L
Power density (mass)	2,698 W/kg
Power density (volume)	7,184 W/L
Capacity ranking	#92 of 279 18650s

PHYSICAL

Diameter	18.5 mm
Length	65.25 mm
Weight	46.7 g

ELECTRICAL

Rated capacity	2,700 mAh
Nominal voltage	3.6 V
Max charge voltage	4.2 V
Discharge cutoff	2 V
Energy	9.72 Wh
Max continuous discharge	35 A (mooch)
Discharge C-rate	13C
Standard charge current	2,700 mA
Typical charge time	1 h
Standard discharge	540mA
Cycle life	500 cycles

C-RATE CONVERSION · 2,700 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.54 A	5h 00m
0.5C	1.35 A	2h 00m
1C	2.7 A	1h 00m
2C	5.4 A	30m
3C	8.1 A	20m
5C	13.5 A	12m

8C	21.6 A	7m 30s
10C	27 A	6m

Highlighted row is closest to the rated 35 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,350 mA	~2h 00m
1C	2,700 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	8.1 Ah	87 Wh
7S	25.2 V	29.4 V	21	8.1 Ah	204 Wh
10S	36 V	42 V	30	8.1 Ah	292 Wh
13S	46.8 V	54.6 V	39	8.1 Ah	379 Wh
14S	50.4 V	58.8 V	42	8.1 Ah	408 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 5,400 mAh · 136 Wh 70 A max · ≈0.65 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 10,800 mAh · 505 Wh 140 A max · ≈2.43 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 10,800 mAh · 622 Wh 140 A max · ≈2.99 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 16,200 mAh · 233 Wh 210 A max · ≈1.12 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Murata VTC5D (this cell)	2,700	35 A	9.72	46.7 g	208
LG LGABE11865	3,200	9 A	12	49 g	245
LG LGEBE11865	3,200	4.9 A	12	49 g	245
Samsung ICR18650-32A	3,200	6.4 A	12	50 g	240
EVE EVE-INR18650/33V	3,200	10 A	11.5	—	—
LG LGDBMH11865	3,200	10 A	11.5	49 g	235

HANDLING & SAFETY

- Never charge above 4.2V or discharge below 2V.
- 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/murata-vtc5d
Manufacturer datasheet	https://www.murata.com/-/media/webrenewal/products/batteries/c...
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-m...
Full cell database	cellsaviors.com/cell-database