

18.3 × 64.8 mm
46 g

Live page & updates

Vapcell · released 2018

18650

NMC

MOOCH-TESTED · 30 A

CAPACITY

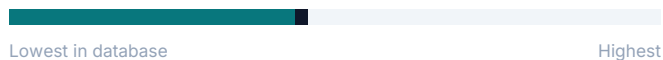
MOOCH CONTINUOUS

NOMINAL · 2.5 – 4.2 V

ENERGY · 187.83 WH/KG

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.

#153 of 279



Higher discharge than 90% of 18650 cells in our database.
Great for high-drain builds.

1.7 V usable



Below nominal the cell sags fast under load; above it, the last of the capacity fills slowly on the constant-voltage taper.

APPLICATION SUITABILITY

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

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|---------------------|---|
| ● 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

Manufacturer	Vapcell
Model	PURPLE 30A 2400mAh
Format	18650
Chemistry	NMC
Year released	2018
Wrap colour	Purple
Terminal	Flat top
Protection	Unprotected

OPERATING TEMPERATURE

Charging	0°C to 45°C
Discharging	-20°C to 70°C

ENERGY & POWER DENSITY

Energy	8.64 Wh
Specific energy	187.83 Wh/kg
Volumetric density	506.93 Wh/L
Power density (mass)	2,348 W/kg
Power density (volume)	6,337 W/L
Capacity ranking	#153 of 279 18650s

C-RATE CONVERSION · 2,400 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.48 A	5h 00m
0.5C	1.2 A	2h 00m
1C	2.4 A	1h 00m
2C	4.8 A	30m
3C	7.2 A	20m
5C	12 A	12m

PHYSICAL

Diameter	18.3 mm
Length	64.8 mm
Weight	46 g

ELECTRICAL

Rated capacity	2,400 mAh
Nominal voltage	3.6 V
Max charge voltage	4.2 V
Discharge cutoff	2.5 V
Energy	8.64 Wh
Internal resistance	10 mΩ
Max continuous discharge	30 A (mooch)
Discharge C-rate	12.5C
Standard charge current	1,000 mA
Typical charge time	2.4 h
Standard discharge	480mA

8C	19.2 A	7m 30s
10C	24 A	6m

Highlighted row is closest to the rated 30 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
Standard	1,000 mA	~2h 24m
0.5C	1,200 mA	~2h 00m
1C	2,400 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	7.2 Ah	78 Wh
7S	25.2 V	29.4 V	21	7.2 Ah	181 Wh
10S	36 V	42 V	30	7.2 Ah	259 Wh
13S	46.8 V	54.6 V	39	7.2 Ah	337 Wh
14S	50.4 V	58.8 V	42	7.2 Ah	363 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 4,800 mAh · 121 Wh 60 A max · ≈0.64 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 9,600 mAh · 449 Wh 120 A max · ≈2.39 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 9,600 mAh · 553 Wh 120 A max · ≈2.94 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 14,400 mAh · 207 Wh 180 A max · ≈1.1 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Vapcell PURPLE 30A 2400mAh (this cell)	2,400	30 A	8.64	46 g	188
Panasonic NCR18650PD	2,900	10 A	10.7	44.5 g	241
LG LGABC11865	2,800	4.1 A	10.5	47 g	223
LG LGDC118650	2,800	4.1 A	10.5	47 g	223
Samsung ICR18650-28A	2,800	5.6 A	10.5	48 g	219
Samsung INR18650-29E	2,900	5 A	10.5	48 g	219

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 Savors page	cellsaviors.com/cell-database/vapcell-purple-30a-2400mah
Manufacturer datasheet	https://lygte-info.dk/review/batteries2012/Vapcell%20INR18650%2028A
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-v...
Full cell database	cellsaviors.com/cell-database