

Illustrative render generated from published specifications

20 × 70.2 mm
60 g

Vapcell GOLD
30A 3200mAh



Live page & updates

Vapcell · released 2017

20700

NMC

MOOCH-TESTED · 30 A

3,200 mAh CAPACITY	30 A MOOCH CONTINUOUS	3.6 v NOMINAL · 2.5 – 4.2 V	11.52 Wh ENERGY · 192 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 20700S

#5 of 12

Lowest in database

Highest

A mid-range 20700 cell. Solid for builds that don't need extreme capacity or discharge.

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.

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	High capacity means long runtime. Great for everyday carry and extended use.
Power tools	Sufficient discharge and capacity for most power tool packs.

IDENTITY

Manufacturer	Vapcell
Model	GOLD 30A 3200mAh
Format	20700
Chemistry	NMC
Year released	2017
Wrap colour	Gold
Insulator	White
Terminal	Flat top
Protection	Unprotected

OPERATING TEMPERATURE

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

ENERGY & POWER DENSITY

Energy	11.52 Wh
Specific energy	192 Wh/kg
Volumetric density	522.35 Wh/L
Power density (mass)	1,800 W/kg
Power density (volume)	4,897 W/L
Capacity ranking	#5 of 12 20700s

PHYSICAL

Diameter	20 mm
Length	70.2 mm
Weight	60 g

ELECTRICAL

Rated capacity	3,200 mAh
Nominal voltage	3.6 V
Max charge voltage	4.2 V
Discharge cutoff	2.5 V
Energy	11.52 Wh
Internal resistance	10 mΩ
Max continuous discharge	30 A (mooch)
Discharge C-rate	9.4C
Standard charge current	2,000 mA
Typical charge time	1.6 h
Standard discharge	640mA

C-RATE CONVERSION · 3,200 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.64 A	5h 00m
0.5C	1.6 A	2h 00m
1C	3.2 A	1h 00m
2C	6.4 A	30m
3C	9.6 A	20m
5C	16 A	12m

8C

25.6 A

7m 30s

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

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,600 mA	~2h 00m
Standard	2,000 mA	~1h 36m
1C	3,200 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	9.6 Ah	104 Wh
7S	25.2 V	29.4 V	21	9.6 Ah	242 Wh
10S	36 V	42 V	30	9.6 Ah	346 Wh
13S	46.8 V	54.6 V	39	9.6 Ah	449 Wh
14S	50.4 V	58.8 V	42	9.6 Ah	484 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 6,400 mAh · 161 Wh 60 A max · ≈0.84 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 12,800 mAh · 599 Wh 120 A max · ≈3.12 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 12,800 mAh · 737 Wh 120 A max · ≈3.84 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 19,200 mAh · 276 Wh 180 A max · ≈1.44 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Vapcell GOLD 30A 3200mAh (this cell)	3,200	30 A	11.52	60 g	192
Dyson INR-20700A	3,000	35 A	10.8	57.8 g	187
Efest INR20700	3,000	30 A	10.8	57.8 g	187
Xtar 20700 3000mAh 35A	3,000	35 A	10.8	57.8 g	187
Energig EC-27HC	2,950	35 A	10.6	60 g	177
Molicel INR20700A	2,800	35 A	10.1	57.8 g	174

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-gold-30a-3200mah
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-v...
Full cell database	cellsaviors.com/cell-database