

Illustrative render generated from published specifications

21.5 × 70.4 mm
73.1 g

Efest PURPLE

35A 3700mAh



Live page & updates

Efest · released 2018

21700NMC

MOOCH-TESTED · 35 A

3,700 mAh CAPACITY	35 A MOOCH CONTINUOUS	3.6 V NOMINAL · 2.5 – 4.2 V	13.32 Wh ENERGY · 182.22 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 21700S

#66 of 72

Lowest in database

Highest

A mid-range 21700 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	Efest
Model	PURPLE 35A 3700mAh
Format	21700
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 75°C

ENERGY & POWER DENSITY

Energy	13.32 Wh
Specific energy	182.22 Wh/kg
Volumetric density	521.15 Wh/L
Power density (mass)	1,724 W/kg
Power density (volume)	4,930 W/L
Capacity ranking	#66 of 72 21700s

C-RATE CONVERSION · 3,700 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.74 A	5h 00m
0.5C	1.85 A	2h 00m
1C	3.7 A	1h 00m
2C	7.4 A	30m
3C	11.1 A	20m
5C	18.5 A	12m

PHYSICAL

Diameter	21.5 mm
Length	70.4 mm
Weight	73.1 g

ELECTRICAL

Rated capacity	3,700 mAh
Nominal voltage	3.6 V
Max charge voltage	4.2 V
Discharge cutoff	2.5 V
Energy	13.32 Wh
Internal resistance	15 mΩ
Max continuous discharge	35 A (mooch)
Discharge C-rate	9.5C
Standard charge current	2,000 mA
Typical charge time	1.9 h

8C

29.6 A

7m 30s

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

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,850 mA	~2h 00m
Standard	2,000 mA	~1h 51m
1C	3,700 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	11.1 Ah	120 Wh
7S	25.2 V	29.4 V	21	11.1 Ah	280 Wh
10S	36 V	42 V	30	11.1 Ah	400 Wh
13S	46.8 V	54.6 V	39	11.1 Ah	519 Wh
14S	50.4 V	58.8 V	42	11.1 Ah	559 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 7,400 mAh · 186 Wh 70 A max · ≈1.02 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 14,800 mAh · 693 Wh 140 A max · ≈3.8 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 14,800 mAh · 852 Wh 140 A max · ≈4.68 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 22,200 mAh · 320 Wh 210 A max · ≈1.75 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Efest PURPLE 35A 3700mAh (this cell)	3,700	35 A	13.32	73.1 g	182
Xtar XTAR 30A 4200mAh	4,200	30 A	15.1	70 g	216
Hohm Tech Hohm Run XL	4,007	30 A	14.4	—	—
Ampace JP40	4,000	60 A	14.4	69 g	209
Energig EC-2174HC	4,000	30 A	14.4	70 g	206
EVE INR21700-40P	4,000	35 A	14.4	70 g	206

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/efest-purple-35a-3700mah
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-e...
Full cell database	cellsaviors.com/cell-database