

Illustrative render generated from published specifications

21.1 × 70.3 mm
67.6 g

Imren 21700

4800mAh 30A



Live page & updates

Imren · released 2017

- 21700
- NMC
- MOOCH-TESTED · 30 A

4,800 mAh CAPACITY	30 A MOOCH CONTINUOUS	3.6 V NOMINAL · 2.5 – 4.2 V	17.28 Wh ENERGY · 255.62 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 #38 of 72 Lowest in databaseHighest 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 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	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	Imren
Model	21700 4800mAh 30A
Format	21700
Chemistry	NMC
Year released	2017
Wrap colour	Green
Insulator	White
Terminal	Flat top
Protection	Unprotected

OPERATING TEMPERATURE

Charging	0°C to 45°C
Discharging	-20°C to 60°C

ENERGY & POWER DENSITY

Energy	17.28 Wh
Specific energy	255.62 Wh/kg
Volumetric density	702.96 Wh/L
Power density (mass)	1,598 W/kg
Power density (volume)	4,394 W/L
Capacity ranking	#38 of 72 21700s

PHYSICAL

Diameter	21.1 mm
Length	70.3 mm
Weight	67.6 g

ELECTRICAL

Rated capacity	4,800 mAh
Nominal voltage	3.6 V
Max charge voltage	4.2 V
Discharge cutoff	2.5 V
Energy	17.28 Wh
Max continuous discharge	30 A (mooch)
Discharge C-rate	6.3C
Standard charge current	1,440 mA
Typical charge time	3.3 h
Cycle life	500 cycles

C-RATE CONVERSION · 4,800 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.96 A	5h 00m
0.5C	2.4 A	2h 00m
1C	4.8 A	1h 00m
2C	9.6 A	30m
3C	14.4 A	20m
5C	24 A	12m

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

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
Standard	1,440 mA	~3h 20m
0.5C	2,400 mA	~2h 00m
1C	4,800 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	14.4 Ah	156 Wh
7S	25.2 V	29.4 V	21	14.4 Ah	363 Wh
10S	36 V	42 V	30	14.4 Ah	518 Wh
13S	46.8 V	54.6 V	39	14.4 Ah	674 Wh
14S	50.4 V	58.8 V	42	14.4 Ah	726 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 9,600 mAh · 242 Wh 60 A max · ≈0.95 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 19,200 mAh · 899 Wh 120 A max · ≈3.52 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 19,200 mAh · 1,106 Wh 120 A max · ≈4.33 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 28,800 mAh · 415 Wh 180 A max · ≈1.62 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Imren 21700 4800mAh 30A (this cell)	4,800	30 A	17.28	67.6 g	256
BAK 53E	5,300	10 A	19.1	69 g	277
Samsung INR21700-53G	5,300	10 A	19.1	72 g	265
LG M50T	5,014	14 A	18.1	70 g	258
Ampace JP50P1	5,000	40 A	18	72 g	250
Amprius INR21700-50Q	5,000	50 A	18	70 g	257

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/imren-21700-4800mah-30a
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-i...
Full cell database	cellsaviors.com/cell-database