

Illustrative render generated from published specifications

21.35 × 70.3 mm
71.5 g

Reliance RS60

Reliance · released 2025

21700NMC

MOOCH-TESTED · 50 A



Live page & updates

5,850mAh CAPACITY	50A MOOCH CONTINUOUS	3.6V NOMINAL · 2.5 – 4.2 V	21.06Wh ENERGY · 294.55 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 #8 of 72 Lowest in databaseHighest Top tier for both capacity and discharge. One of the best all-around 21700 cells.	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		PHYSICAL		
Manufacturer	Reliance	Diameter	21.35 mm	
Model	RS60	Length	70.3 mm	
Format	21700	Weight	71.5 g	
Chemistry	NMC	ELECTRICAL		
Year released	2025			
Terminal	Flat top			
Protection	Unprotected			
OPERATING TEMPERATURE				
Charging	-20°C to 60°C	Rated capacity	5,850 mAh	
Discharging	-40°C to 80°C	Nominal voltage	3.6 V	
ENERGY & POWER DENSITY		Max charge voltage	4.2 V	
		Discharge cutoff	2.5 V	
		Energy	21.06 Wh	
		Max continuous discharge	50 A (mooch)	
		Discharge C-rate	8.5C	
Energy	21.06 Wh	Cycle life	500 cycles	
Specific energy	294.55 Wh/kg			
Volumetric density	836.79 Wh/L			
Power density (mass)	2,517 W/kg			
Power density (volume)	7,152 W/L			
Capacity ranking	#8 of 72 21700s			
C-RATE CONVERSION · 5,850 MAH				
C-RATE	CURRENT			THEORETICAL RUNTIME
0.2C	1.17 A			5h 00m
0.5C	2.93 A	2h 00m		
1C	5.85 A	1h 00m		
2C	11.7 A	30m		
3C	17.55 A	20m		
5C	29.25 A	12m		
8C	46.8 A	7m 30s		

Highlighted row is closest to the rated 50 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	2,925 mA	~2h 00m
1C	5,850 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	17.5 Ah	190 Wh
7S	25.2 V	29.4 V	21	17.5 Ah	442 Wh
10S	36 V	42 V	30	17.5 Ah	632 Wh
13S	46.8 V	54.6 V	39	17.5 Ah	821 Wh
14S	50.4 V	58.8 V	42	17.5 Ah	885 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.2 V 11,700 mAh · 295 Wh 100 A max · ≈1 kg cells	13S4P 48V ebike standard 52 cells · 46.8 V 23,400 mAh · 1,095 Wh 200 A max · ≈3.72 kg cells	16S4P DIY powerwall 64 cells · 57.6 V 23,400 mAh · 1,348 Wh 200 A max · ≈4.58 kg cells	4S6P Power tool replacement 24 cells · 14.4 V 35,100 mAh · 505 Wh 300 A max · ≈1.72 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Reliance RS60 (this cell)	5,850	50 A	21.06	71.5 g	295
Vapcell F63	6,250	12 A	22.5	—	—
Linkdata 60P	6,000	60 A	21.6	68 g	318
Vapcell F60	6,000	12 A	21.6	74 g	292
Reliance RH60	5,850	20 A	21.1	71 g	297
Lishen LR2170SK	5,800	16 A	20.9	—	—

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/reliance-rs60
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-r...
Full cell database	cellsaviors.com/cell-database