Illustrative render generated from published specifications

21.35 × 70.3 mm
71.5 g

Reliance RS60

Reliance · released 2025

21700 | NMC

MOOCH-TESTED · 50 A

Live page & updates

5,850 mAh	50 A	3.6 V	21.06 Wh
CAPACITY	MOOCH CONTINUOUS	NOMINAL · 2.5 – 4.2 V	ENERGY · 294.55 WH/KG

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 database — Highest

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 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	**Reliance**
Model	**RS60**
Format	**21700**
Chemistry	**NMC**
Year released	**2025**
Terminal	**Flat top**
Protection	**Unprotected**

OPERATING TEMPERATURE

Charging	**-20°C to 60°C**
Discharging	**-40°C to 80°C**

ENERGY & POWER DENSITY

Energy	**21.06 Wh**
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**

PHYSICAL

Diameter	**21.35 mm**
Length	**70.3 mm**
Weight	**71.5 g**

ELECTRICAL

Rated capacity	**5,850 mAh**
Nominal voltage	**3.6 V**
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**
Cycle life	**500 cycles**

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

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	74 g	304
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	68 g	307

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 Saviors 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