

Illustrative render generated from published specifications

Samsung
INR18650-15R



Live page & updates

Samsung

- 18650
- NMC

1,500 mAh CAPACITY	— A RATED CONTINUOUS	3.7 V NOMINAL · 2.5 – 4.2 V	5.55 Wh ENERGY
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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 18650S

#149 of 169

Lowest in database

Highest

A mid-range 18650 cell. Solid for builds that don't need extreme capacity or discharge.

VOLTAGE OPERATING WINDOW

1.7 V usable

Cutoff 2.5 V

Nominal 3.7 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.

IDENTITY		ELECTRICAL	
Manufacturer	Samsung	Rated capacity	1,500 mAh
Model	INR18650-15R	Nominal voltage	3.7 V
Format	18650	Max charge voltage	4.2 V
Chemistry	NMC	Discharge cutoff	2.5 V
Wrap colour	Teal	Energy	5.55 Wh
Insulator	White	Internal resistance	70 mΩ
Terminal	Flat top	Standard charge current	1,200 mA
Protection	Unprotected	Typical charge time	1.3 h

ENERGY & POWER DENSITY

Energy	5.55 Wh
Capacity ranking	#149 of 169 18650s

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	750 mA	~2h 00m
Standard	1,200 mA	~1h 15m
1C	1,500 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	11.1 V	12.6 V	9	4.5 Ah	50 Wh
7S	25.9 V	29.4 V	21	4.5 Ah	117 Wh
10S	37 V	42 V	30	4.5 Ah	167 Wh
13S	48.1 V	54.6 V	39	4.5 Ah	216 Wh
14S	51.8 V	58.8 V	42	4.5 Ah	233 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.9 V 3,000 mAh · 78 Wh	13S4P 48V ebike standard 52 cells · 48.1 V 6,000 mAh · 289 Wh	16S4P DIY powerwall 64 cells · 59.2 V 6,000 mAh · 355 Wh	4S6P Power tool replacement 24 cells · 14.8 V 9,000 mAh · 133 Wh
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Samsung INR18650-15R (this cell)	1,500	—	5.55	—	—
ATL INR18650	2,000	6 A	7.4	45 g	164
Cham CMICR18650F8	2,000	5.1 A	7.4	45 g	164
Great Power ICR 18650	2,000	4 A	7.4	44 g	168
HYB ICR18650NM	2,000	—	7.4	—	—
Samsung ICR18650-20	2,000	4 A	7.4	—	—

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/samsung-inr18650-15r
Full cell database	cellsaviors.com/cell-database