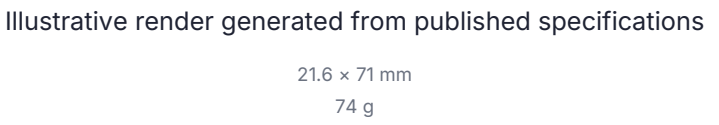

Illustrative render generated from published specifications

21.6 × 71 mm
74 g

# Amprius INR21700-65

Amprius · released 2025

21700 | NMC | MOOCH-TESTED · 13 A

Live page & updates

| 6,500 mAh | 13 A | 3.6 V | 23.4 Wh |
|---|---|---|---|
| CAPACITY | MOOCH CONTINUOUS | NOMINAL · 2.5 – 4.2 V | ENERGY · 316.22 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

**#1 of 72**

Lowest in database — Highest

More capacity than 100% of 21700 cells in our database, but lower discharge than average.

### 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** | Might work for smaller setups. Check your amp's peak current draw. |
| **High-drain vaping** | Below the 25A Mooch CDR threshold that high-drain vaping needs. Use a higher-drain cell. |
| **Flashlights** | High capacity means long runtime. Great for everyday carry and extended use. |
| **Power tools** | May work for lighter-duty tools. Check your tool's current requirements. |

## IDENTITY

| | |
|---|---|
| Manufacturer | **Amprius** |
| Model | **INR21700-65** |
| Format | **21700** |
| Chemistry | **NMC** |
| Year released | **2025** |
| Terminal | **Flat top** |
| Protection | **Unprotected** |

## OPERATING TEMPERATURE

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

## ENERGY & POWER DENSITY

| | |
|---|---|
| Energy | **23.4 Wh** |
| Specific energy | **316.22 Wh/kg** |
| Volumetric density | **899.41 Wh/L** |
| Power density (mass) | **632 W/kg** |
| Power density (volume) | **1,799 W/L** |
| Capacity ranking | **#1 of 72 21700s** |

## PHYSICAL

| | |
|---|---|
| Diameter | **21.6 mm** |
| Length | **71 mm** |
| Weight | **74 g** |

## ELECTRICAL

| | |
|---|---|
| Rated capacity | **6,500 mAh** |
| Nominal voltage | **3.6 V** |
| Max charge voltage | **4.2 V** |
| Discharge cutoff | **2.5 V** |
| Energy | **23.4 Wh** |
| Internal resistance | **3.3 mΩ** |
| Max continuous discharge | **13 A (mooch)** |
| Discharge C-rate | **2C** |
| Standard charge current | **3,250 mA** |
| Typical charge time | **2 h** |
| Standard discharge | **1300mA** |
| Cycle life | **500 cycles** |

## C-RATE CONVERSION · 6,500 MAH

| C-RATE | CURRENT | THEORETICAL RUNTIME |
|---|---|---|
| **0.2C** | 1.3 A | 5h 00m |
| **0.5C** | 3.25 A | 2h 00m |
| **1C** | 6.5 A | 1h 00m |
| **2C** | **13 A** | **30m** |

Highlighted row is closest to the rated 13 A continuous discharge.

## CHARGING

| RATE | CURRENT | ESTIMATED TIME TO FULL |
|---|---|---|

| | | |
|---|---|---|
| **0.5C** | 3,250 mA | ~2h 00m |
| **1C** | 6,500 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** | 10.8 V | 12.6 V | 9 | 19.5 Ah | 211 Wh |
| **7S** | 25.2 V | 29.4 V | 21 | 19.5 Ah | 491 Wh |
| **10S** | 36 V | 42 V | 30 | 19.5 Ah | 702 Wh |
| **13S** | 46.8 V | 54.6 V | 39 | 19.5 Ah | 913 Wh |
| **14S** | 50.4 V | 58.8 V | 42 | 19.5 Ah | 983 Wh |

## EXAMPLE PACKS

### 7S2P
24V ebike / small pack

14 cells · 25.2 V

13,000 mAh · 328 Wh

26 A max · ≈1.04 kg cells

### 13S4P
48V ebike standard

52 cells · 46.8 V

26,000 mAh · 1,217 Wh

52 A max · ≈3.85 kg cells

### 16S4P
DIY powerwall

64 cells · 57.6 V

26,000 mAh · 1,498 Wh

52 A max · ≈4.74 kg cells

### 4S6P
Power tool replacement

24 cells · 14.4 V

39,000 mAh · 562 Wh

78 A max · ≈1.78 kg cells

## SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

| CELL | MAH | CONTINUOUS | WH | WEIGHT | WH/KG |
|---|---|---|---|---|---|
| **Amprius INR21700-65 (this cell)** | **6,500** | **13 A** | **23.4** | **74 g** | **316** |
| BAK 65E | 6,500 | 25 A | 23.4 | 75 g | 312 |
| Linkdata 65P | 6,500 | 52 A | 23.4 | 70.2 g | 333 |
| 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 |

## 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/amprius-inr21700-65 |
| Manufacturer datasheet | https://amprius.com/documents/Amprius_Product_Catalog.pdf |
| Independent test (Mooch) | https://www.e-cigarette-forum.com/threads/bench-test-results-a... |
| Full cell database | cellsaviors.com/cell-database |