



Samsung ICR18650-18

Samsung

18650

ICR



Live page & updates

18.4 × 65 mm  
46 g

1,800 mAh

CAPACITY

— A

RATED CONTINUOUS

3.6 V

NOMINAL · 2.75 – 4.2 V

6.48 Wh

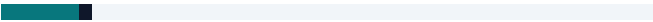
ENERGY · 140.87 WH/KG

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.

CAPACITY AMONG 18650S

#243 of 279



Lowest in database

Highest

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

VOLTAGE OPERATING WINDOW

1.45 V usable



Cutoff 2.75 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.



|     |        |        |    |        |        |
|-----|--------|--------|----|--------|--------|
| 10S | 36 V   | 42 V   | 30 | 5.4 Ah | 194 Wh |
| 13S | 46.8 V | 54.6 V | 39 | 5.4 Ah | 253 Wh |
| 14S | 50.4 V | 58.8 V | 42 | 5.4 Ah | 272 Wh |

## EXAMPLE PACKS

|                                                                                                     |                                                                                                   |                                                                                              |                                                                                                      |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>7S2P</b><br>24V ebike / small pack<br>14 cells · 25.2 V<br>3,600 mAh · 91 Wh<br>· ≈0.64 kg cells | <b>13S4P</b><br>48V ebike standard<br>52 cells · 46.8 V<br>7,200 mAh · 337 Wh<br>· ≈2.39 kg cells | <b>16S4P</b><br>DIY powerwall<br>64 cells · 57.6 V<br>7,200 mAh · 415 Wh<br>· ≈2.94 kg cells | <b>4S6P</b><br>Power tool replacement<br>24 cells · 14.4 V<br>10,800 mAh · 156 Wh<br>· ≈1.1 kg cells |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|

## SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

| CELL                            | MAH   | CONTINUOUS | WH   | WEIGHT | WH/KG |
|---------------------------------|-------|------------|------|--------|-------|
| Samsung ICR18650-18 (this cell) | 1,800 | —          | 6.48 | 46 g   | 141   |
| Tenergy LR1865S1                | 2,200 | 4.4 A      | 7.9  | 46 g   | 172   |
| Hitachi Maxell (HM) ICR18650PA  | 1,450 | 20 A       | 6.1  | —      | —     |

## HANDLING &amp; SAFETY

- Never charge above 4.2V or discharge below 2.75V.
- 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 &amp; FURTHER READING

|                    |                                                                                                                           |
|--------------------|---------------------------------------------------------------------------------------------------------------------------|
| Cell Savors page   | <a href="https://cellsaviors.com/cell-database/samsung-icr18650-18">cellsaviors.com/cell-database/samsung-icr18650-18</a> |
| Full cell database | <a href="https://cellsaviors.com/cell-database">cellsaviors.com/cell-database</a>                                         |