

Illustrative render generated from published specifications

18.5 × 65.1 mm
43.1 g

Sanyo UR18650S

Sanyo

18650 NMC



Live page & updates

1,100 mAh CAPACITY	— A RATED CONTINUOUS	3.7 V NOMINAL · 2.5 – 4.2 V	4.07 Wh ENERGY · 94.43 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 18650S

#167 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

Manufacturer	Sanyo
Model	UR18650S
Format	18650
Chemistry	NMC
Wrap colour	Red
Insulator	Orange
Terminal	Flat top
Protection	Unprotected

OPERATING TEMPERATURE

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

ENERGY & POWER DENSITY

Energy	4.07 Wh
Specific energy	94.43 Wh/kg
Volumetric density	232.58 Wh/L
Capacity ranking	#167 of 169 18650s

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	550 mA	~2h 00m
Standard	770 mA	~1h 26m
1C	1,100 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	3.3 Ah	37 Wh

7S	25.9 V	29.4 V	21	3.3 Ah	85 Wh
10S	37 V	42 V	30	3.3 Ah	122 Wh
13S	48.1 V	54.6 V	39	3.3 Ah	159 Wh
14S	51.8 V	58.8 V	42	3.3 Ah	171 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.9 V 2,200 mAh · 57 Wh · ≈0.6 kg cells	13S4P 48V ebike standard 52 cells · 48.1 V 4,400 mAh · 212 Wh · ≈2.24 kg cells	16S4P DIY powerwall 64 cells · 59.2 V 4,400 mAh · 260 Wh · ≈2.76 kg cells	4S6P Power tool replacement 24 cells · 14.8 V 6,600 mAh · 98 Wh · ≈1.03 kg cells
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SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Sanyo UR18650S (this cell)	1,100	—	4.07	43.1 g	94
LG LGDAHB21865	1,500	30 A	5.6	48 g	117
Panasonic CGR18650H	1,500	—	5.6	25 g	222
Samsung INR18650-15R	1,500	—	5.6	—	—
Sanyo UR18650W2	1,500	15 A	5.6	47 g	118
Sanyo UR18650WX	1,500	10 A	5.6	46.9 g	118

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/sanyo-ur18650s

Manufacturer datasheet

<https://na.industrial.panasonic.com/sites/default/pidsa/files/...>

Full cell database

cellsaviors.com/cell-database