Illustrative render generated from published specifications

18.1 × 64.8 mm

Sanyo UR18650P

Sanyo · released 2000

18650 NMC

Live page & updates

1,700 mAh	— A	3.7 V	6.29 Wh
CAPACITY	RATED CONTINUOUS	NOMINAL · 2.5 – 4.2 V	ENERGY

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 — #147 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	**UR18650P**
Format	**18650**
Chemistry	**NMC**
Year released	**2000**
Wrap colour	**Red**
Insulator	**Black**
Terminal	**Flat top**
Protection	**Unprotected**

OPERATING TEMPERATURE

Charging	**0°C to 40°C**
Discharging	**-20°C to 60°C**

ENERGY & POWER DENSITY

Energy	**6.29 Wh**
Volumetric density	**377.25 Wh/L**
Capacity ranking	**#147 of 169 18650s**

PHYSICAL

Diameter	**18.1 mm**
Length	**64.8 mm**

ELECTRICAL

Rated capacity	**1,700 mAh**
Nominal voltage	**3.7 V**
Max charge voltage	**4.2 V**
Discharge cutoff	**2.5 V**
Energy	**6.29 Wh**
Standard charge current	**1,700 mA**
Typical charge time	**1 h**
Standard discharge	**340mA**
Cycle life	**300 cycles**

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	850 mA	~2h 00m
1C	1,700 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	5.1 Ah	57 Wh
7S	25.9 V	29.4 V	21	5.1 Ah	132 Wh

10S	37 V	42 V	30	5.1 Ah	189 Wh
13S	48.1 V	54.6 V	39	5.1 Ah	245 Wh
14S	51.8 V	58.8 V	42	5.1 Ah	264 Wh

EXAMPLE PACKS

7S2P
24V ebike / small pack

14 cells · 25.9 V

3,400 mAh · 88 Wh

13S4P
48V ebike standard

52 cells · 48.1 V

6,800 mAh · 327 Wh

16S4P
DIY powerwall

64 cells · 59.2 V

6,800 mAh · 403 Wh

4S6P
Power tool replacement

24 cells · 14.8 V

10,200 mAh · 151 Wh

SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Sanyo UR18650P (this cell)	**1,700**	**—**	**6.29**	**—**	**—**
BAK 18650C4	2,200	2 A	8.1	—	—
BFN 18650-2200	2,200	25 A	8.1	—	—
Great Power ICR18650 2.2Ah-AT	2,200	4.4 A	8.1	45 g	181
LG LGAAS41865	2,200	45 A	8.1	44.5 g	183
LG LGCAS31865	2,200	4.3 A	8.1	47 g	173

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/sanyo-ur18650p
Manufacturer datasheet	https://www.master-instruments.com.au/files/data_sheets/Lithiu...
Full cell database	cellsaviors.com/cell-database