

Illustrative render generated from published specifications

Panasonic
NCR18650D



Live page & updates

Panasonic

18650 NMC

2,700 mAh CAPACITY	5.1 A RATED CONTINUOUS	3.7 V NOMINAL · 2.5 – 4.2 V	9.99 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 #36 of 169 Lowest in database Highest More capacity than 79% of 18650 cells in our database. One of the higher-capacity options.	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.
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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	Marginal. Check your motor's peak draw first. You might get voltage sag under load.
Car audio	Not enough discharge for car audio amplifiers. You need at least 15-20A continuous for most setups.
High-drain vaping	Below the 25A Mooch CDR threshold that high-drain vaping needs. Use a higher-drain cell.
Flashlights	Decent runtime. Works well for most flashlights.
Power tools	Not enough discharge or capacity for power tool use.

IDENTITY		ELECTRICAL	
Manufacturer	Panasonic	Rated capacity	2,700 mAh
Model	NCR18650D	Nominal voltage	3.7 V
Format	18650	Max charge voltage	4.2 V
Chemistry	NMC	Discharge cutoff	2.5 V
Wrap colour	Gray	Energy	9.99 Wh
Insulator	White	Max continuous discharge	5.1 A (datasheet)
Terminal	Flat top	Discharge C-rate	1.9C
Protection	Unprotected	Standard charge current	1,780 mA
ENERGY & POWER DENSITY		Typical charge time	1.5 h
Energy	9.99 Wh	Standard discharge	510mA
Capacity ranking	#36 of 169 18650s		

C-RATE CONVERSION · 2,700 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.54 A	5h 00m
0.5C	1.35 A	2h 00m
1C	2.7 A	1h 00m

Highlighted row is closest to the rated 5.1 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,350 mA	~2h 00m
Standard	1,780 mA	~1h 31m
1C	2,700 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
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3S	11.1 V	12.6 V	9	8.1 Ah	90 Wh
7S	25.9 V	29.4 V	21	8.1 Ah	210 Wh
10S	37 V	42 V	30	8.1 Ah	300 Wh
13S	48.1 V	54.6 V	39	8.1 Ah	390 Wh
14S	51.8 V	58.8 V	42	8.1 Ah	420 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.9 V 5,400 mAh · 140 Wh 10 A max	13S4P 48V ebike standard 52 cells · 48.1 V 10,800 mAh · 519 Wh 20 A max	16S4P DIY powerwall 64 cells · 59.2 V 10,800 mAh · 639 Wh 20 A max	4S6P Power tool replacement 24 cells · 14.8 V 16,200 mAh · 240 Wh 31 A max
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
Panasonic NCR18650D (this cell)	2,700	5.1 A	9.99	—	—
LG LGABE11865	3,200	9 A	12	49 g	245
LG LGEBE11865	3,200	4.9 A	12	—	—
Samsung ICR18650-32A	3,200	6.4 A	12	50 g	240
EVE EVE-INR18650/33V	3,200	10 A	11.5	—	—
LG LGDBMH11865	3,200	10 A	11.5	—	—

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/panasonic-ncr18650d
Full cell database	cellsaviors.com/cell-database