

Illustrative render generated from published specifications

Nitecore NL2642



Live page & updates

Nitecore

26650 LI-ION

MOOCH-TESTED · 40 A

4,200 mAh CAPACITY	40 A MOOCH CONTINUOUS	3.6 V NOMINAL · 2.5 – 4.2 V	15.12 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 26650S #9 of 15 Lowest in database Highest Higher discharge than 80% of 26650 cells in our database. Great for high-drain builds.	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.
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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	Good balance of capacity for range and discharge for hills. Works well in most ebike packs.
Car audio	Enough discharge to handle amplifier bursts without voltage sag.
High-drain vaping	Above the 25A Mooch CDR threshold. Suitable for regulated and mechanical mods.
Flashlights	High capacity means long runtime. Great for everyday carry and extended use.
Power tools	Sufficient discharge and capacity for most power tool packs.

IDENTITY		ELECTRICAL	
Manufacturer	Nitecore	Rated capacity	4,200 mAh
Model	NL2642	Nominal voltage	3.6 V
Format	26650	Max charge voltage	4.2 V
Chemistry	Li-ion	Discharge cutoff	2.5 V
ENERGY & POWER DENSITY		Energy	15.12 Wh
		Max continuous discharge	40 A (mooch)
		Discharge C-rate	9.5C
Energy	15.12 Wh		
Capacity ranking	#9 of 15 26650s		

C-RATE CONVERSION · 4,200 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.84 A	5h 00m
0.5C	2.1 A	2h 00m
1C	4.2 A	1h 00m
2C	8.4 A	30m
3C	12.6 A	20m
5C	21 A	12m
8C	33.6 A	7m 30s
10C	42 A	6m

Highlighted row is closest to the rated 40 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	2,100 mA	~2h 00m
1C	4,200 mA	~1h 00m

Constant-current phase only. Real charge time runs longer because of the constant-voltage taper at the end.

SERIES PACK CONFIGURATIONS

Voltagess 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	10.8 V	12.6 V	9	12.6 Ah	136 Wh
7S	25.2 V	29.4 V	21	12.6 Ah	318 Wh
10S	36 V	42 V	30	12.6 Ah	454 Wh
13S	46.8 V	54.6 V	39	12.6 Ah	590 Wh
14S	50.4 V	58.8 V	42	12.6 Ah	635 Wh

EXAMPLE PACKS

7S2P

24V ebike / small pack

14 cells · 25.2 V

8,400 mAh · 212 Wh

80 A max

13S4P

48V ebike standard

52 cells · 46.8 V

16,800 mAh · 786 Wh

160 A max

16S4P

DIY powerwall

64 cells · 57.6 V

16,800 mAh · 968 Wh

160 A max

4S6P

Power tool replacement

24 cells · 14.4 V

25,200 mAh · 363 Wh

240 A max

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/nitecore-nl2642

Independent test (Mooch)

<https://www.e-cigarette-forum.com/threads/nitecore-40a-4200mah...>

Full cell database

cellsaviors.com/cell-database