

Illustrative render generated from published specifications

18.5 × 65.2 mm
49 g

LG LGDBMJ11865

LG · also sold as INR18650MJ1 ·

released 2014



Live page & updates

18650NMC

MOOCH-TESTED · 10 A

3,500 mAh CAPACITY	10 A MOOCH CONTINUOUS	3.63 V NOMINAL · 2.5 – 4.2 V	12.71 Wh ENERGY · 259.39 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

#1 of 169

Lowest in databaseHighest

Top tier for both capacity and discharge. One of the best all-around 18650 cells.

VOLTAGE OPERATING WINDOW

1.7 V usable

Cutoff 2.5 VNominal 3.63 VMax 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.

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	Might work for smaller setups. Check your amp's peak current draw.
High-drain vaping	Below the 25A Mooch CDR threshold that high-drain vaping needs. Use a higher-drain cell.
Flashlights	High capacity means long runtime. Great for everyday carry and extended use.
Power tools	May work for lighter-duty tools. Check your tool's current requirements.

IDENTITY		PHYSICAL	
Manufacturer	LG	Diameter	18.5 mm
Model	LGDBMJ11865	Length	65.2 mm
Also sold as	INR18650MJ1	Weight	49 g
Format	18650	ELECTRICAL	
Chemistry	NMC		
Year released	2014	Rated capacity	3,500 mAh
Wrap colour	Green	Nominal voltage	3.63 V
Insulator	White	Max charge voltage	4.2 V
Terminal	Flat top	Discharge cutoff	2.5 V
Protection	Unprotected	Energy	12.71 Wh
OPERATING TEMPERATURE		Internal resistance	40 mΩ
		Max continuous discharge	10 A (mooch)
		Discharge C-rate	2.9C
Charging	0°C to 45°C	Standard charge current	1,700 mA
Discharging	-20°C to 60°C	Typical charge time	2.1 h
ENERGY & POWER DENSITY		Standard discharge	680mA
		Cycle life	400 cycles
		Energy	12.71 Wh
		Specific energy	259.39 Wh/kg
		Volumetric density	725.21 Wh/L
		Power density (mass)	741 W/kg
		Power density (volume)	2,071 W/L
		Capacity ranking	#1 of 169 18650s
C-RATE CONVERSION · 3,500 MAH			
C-RATE	CURRENT	THEORETICAL RUNTIME	
0.2C	0.7 A	5h 00m	
0.5C	1.75 A	2h 00m	
1C	3.5 A	1h 00m	
2C	7 A	30m	
3C	10.5 A	20m	

Highlighted row is closest to the rated 10 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,750 mA	~2h 00m
1C	3,500 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	10.9 V	12.6 V	9	10.5 Ah	114 Wh
7S	25.4 V	29.4 V	21	10.5 Ah	267 Wh
10S	36.3 V	42 V	30	10.5 Ah	381 Wh
13S	47.2 V	54.6 V	39	10.5 Ah	495 Wh
14S	50.8 V	58.8 V	42	10.5 Ah	534 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.4 V 7,000 mAh · 178 Wh 20 A max · ≈0.69 kg cells	13S4P 48V ebike standard 52 cells · 47.2 V 14,000 mAh · 661 Wh 40 A max · ≈2.55 kg cells	16S4P DIY powerwall 64 cells · 58.1 V 14,000 mAh · 813 Wh 40 A max · ≈3.14 kg cells	4S6P Power tool replacement 24 cells · 14.5 V 21,000 mAh · 305 Wh 60 A max · ≈1.18 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
LG LGDBMJ11865 (this cell)	3,500	10 A	12.71	49 g	259
LG LGEBMJ11865	3,500	10 A	12.7	—	—
LG LGABF1L1865	3,350	4.9 A	12.2	49 g	248
LG LGGBF1L1865	3,350	4.9 A	12.2	—	—
Panasonic NCR18650B	3,350	4 A	12.1	47.5 g	254
LG LGABE11865	3,200	9 A	12	49 g	245

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/lg-lgdbmj11865
Manufacturer datasheet	https://www.batteryspace.com/prod-specs/10388.pdf
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-l...
Full cell database	cellsaviors.com/cell-database