Illustrative render generated from published specifications

18.4 × 65 mm
46 g

LG LGDBMG11865

LG · also sold as INR18650MG1 · released 2012

18650 NMC

Live page & updates

2,850 mAh	10 A	3.62 V	10.32 Wh
CAPACITY	RATED CONTINUOUS	NOMINAL · 2.5 – 4.2 V	ENERGY · 224.35 WH/KG

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

#27 of 169

Lowest in database — Highest

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 V — Nominal 3.62 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.

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	Decent runtime. Works well for most flashlights.
Power tools	May work for lighter-duty tools. Check your tool's current requirements.

IDENTITY

Manufacturer	LG
Model	LGDBMG11865
Also sold as	INR18650MG1
Format	18650
Chemistry	NMC
Year released	2012
Wrap colour	Purple
Insulator	White
Terminal	Flat top
Protection	Unprotected

OPERATING TEMPERATURE

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

ENERGY & POWER DENSITY

Energy	10.32 Wh
Specific energy	224.35 Wh/kg
Volumetric density	597.09 Wh/L
Power density (mass)	787 W/kg
Power density (volume)	2,094 W/L
Capacity ranking	#27 of 169 18650s

PHYSICAL

Diameter	18.4 mm
Length	65 mm
Weight	46 g

ELECTRICAL

Rated capacity	2,850 mAh
Nominal voltage	3.62 V
Max charge voltage	4.2 V
Discharge cutoff	2.5 V
Energy	10.32 Wh
Internal resistance	35 mΩ
Max continuous discharge	10 A (datasheet)
Discharge C-rate	3.5C
Standard charge current	1,425 mA
Typical charge time	2 h
Standard discharge	670mA
Cycle life	500 cycles

C-RATE CONVERSION · 2,850 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.57 A	5h 00m
0.5C	1.43 A	2h 00m
1C	2.85 A	1h 00m
2C	5.7 A	30m
3C	8.55 A	20m

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

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
0.5C	1,425 mA	~2h 00m
1C	2,850 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	8.6 Ah	93 Wh
7S	25.3 V	29.4 V	21	8.6 Ah	217 Wh
10S	36.2 V	42 V	30	8.6 Ah	310 Wh
13S	47.1 V	54.6 V	39	8.6 Ah	402 Wh
14S	50.7 V	58.8 V	42	8.6 Ah	433 Wh

EXAMPLE PACKS

7S2P

24V ebike / small pack

14 cells · 25.3 V

5,700 mAh · 144 Wh

20 A max · ≈0.64 kg cells

13S4P

48V ebike standard

52 cells · 47.1 V

11,400 mAh · 536 Wh

40 A max · ≈2.39 kg cells

16S4P

DIY powerwall

64 cells · 57.9 V

11,400 mAh · 660 Wh

40 A max · ≈2.94 kg cells

4S6P

Power tool replacement

24 cells · 14.5 V

17,100 mAh · 248 Wh

60 A max · ≈1.1 kg cells

SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
LG LGDBMG11865 (this cell)	**2,850**	**10 A**	**10.32**	**46 g**	**224**
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
LG LGEBE11865	3,200	4.9 A	12	—	—

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-lgdbmg11865
Manufacturer datasheet	https://www.megacellmonitor.com/pdf/vendor_specs/SPEC_LG_LGDBM...
Full cell database	cellsaviors.com/cell-database