

LiTE Commercial 100/80

Total Energy Capacity [kWh]	100
Energy, 80% DoD [kWh]	80
Energy, 90% DoD [kWh]	90
Current Capacity [Ah]	2000
Max/Cont. Charge and Discharge Current [A] ¹	2000/800
Max/ Cont. Charge and Discharge Power [kW] ¹	100/42
Nominal Voltage [V] ²	52
Max Recommended Inverter Total Rated Power (cont.) [kVA]	90
Battery Dimensions – H x W x D [mm] ³	1650x1480x450
Crated Dimensions – H x W x D [mm]	1686x1516x568
Battery Weight [kg]	883
Crated Weight [kg]	983
DC Connection – Fly Leads (no. per electrode) [mm ²] ⁴	3 x 120mm ² Permopower
Round Trip Efficiency [%]	96-97
Enclosure	Aluminium enclosure painted white, for use indoors or fully protected under-cover environments, rated to IP20
Protection	Shunt Trip Circuit Breaker sized to suit max current, can be tripped by BMS if critical fault, manual reset. Protection for overcurrent, cell under and over voltage, temperature, weak cell detection and other critical events
Control Interface	CAN Bus for diagnostics & troubleshooting. RJ45 Strictly for BMS & inverter communication
Human Interface	On and Off buttons, State of Charge display (0 to 100%), Error light, Error Reset button, USB plug for programming and data access with PC, main breaker
On-board Management	Comprehensive battery management system and internal trip protection
Battery Chemistry	Lithium Iron Phosphate (LiFePO ₄)
Cell Form Factor	Large Format heavy-duty prismatic cells of 200Ah each and 3.2V nominal voltage, fully sealed in plastic casing with laser-welded electrode connections
Battery Cooling	Natural Convection (heat generation is negligible inside the battery)
Suitable Ambient Temp [°C] ⁵	0°C to +35°C
Extreme Operating Temp [°C] ⁵	-20°C to +60°C
Warranty ⁶	10 years or 4 000 cycles for average 80% DoD, and max 90% DoD
Service Life ⁶	>16 years (>5 500 cycles) expected life at 80% DoD per cycle, >20 years (>7 500 cycles) at 50% DoD

Notes to Specification Sheet

1. Max current duration 5min every 10min. 1.5 x Max overload can be handled for 5 seconds. Current limits rated for 10°C to 25°C battery temperature. Derating will apply outside this temperature range.
2. For higher battery voltages refer to the Freedom Won LITE Commercial HV and HV+ ranges.
3. Excluding protrusions.
4. Fly Leads 4.0m long as standard, power cable Red= Positive, Black= Negative, conductors in table refer to one electrode i.e. per positive and negative connections. Up to 8m long available at extra cost (must be specified in order). Note that the fly leads exit the battery on the right hand side near the top.
5. Charging below 0°C not permitted. Extended time above 45°C not recommended for optimal battery life.
6. See Freedom Won Warranty document for further detail.