

LC 50L

LiFePO₄ Battery | 12.8V | 50Ah | 640Wh



Electrical Specifications

Nominal Voltage	12.8V
Nominal Capacity	50Ah
Capacity Tolerance	± 4%
Capacity @ 25 A	120min
Energy	640Wh
Resistance	≤ 30 mΩ @ 50% SOC
Self Discharge	< 3% / month
Cell Type	IFR26650EC - LiFePO ₄

Discharge Specifications

Max. Continuous Discharge Current	50A
Peak Discharge Current	100A (3s)
BMS Discharge Cut-Off Current	160A ±20A (5 to 13ms)
Recommended Low Voltage Disconnect	11V
BMS Discharge Cut-Off Voltage	> 8.0V (120 to 180ms)
Reconnect Voltage	> 8.64V (2.16V / Zelle)
Short Circuit Protection	200 to 600µs

Charge Specifications

Recommended Charge Current	10A
Maximum Charge Current	50A
Recommended Charge Voltage	14.6V
BMS Charge Cut-Off Voltage	< 15.6V (3.9V/Zelle)
Reconnect Voltage	> 15.2V (3.8V/Zelle)
Float Charge Voltage	< 14.4V (3.6V/Zelle)
Maximum Batteries in Series	4

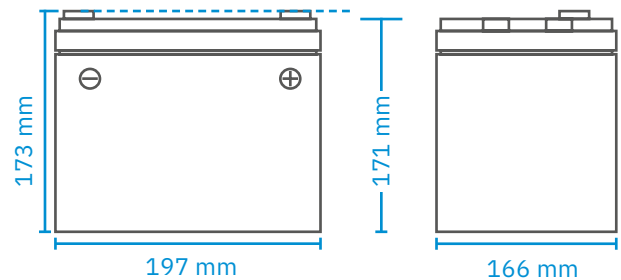
Mechanical Specifications

Measurements (L × W × H)	197 × 166 × 173 mm
Approx. Weight	6.7 kg
Terminal Type	M8
Terminal Torque	9 to 11 N m
Case Material	ABS
Enclosure Protection	IP65

Temperature Specifications

Discharge Temperature	-20 to 60°C
Charge Temperature	0 to 45°C
Storage Temperature	-5 to 35°C
BMS High Temperature Cut-Off	75°C
Reconnect Temperature	53°C

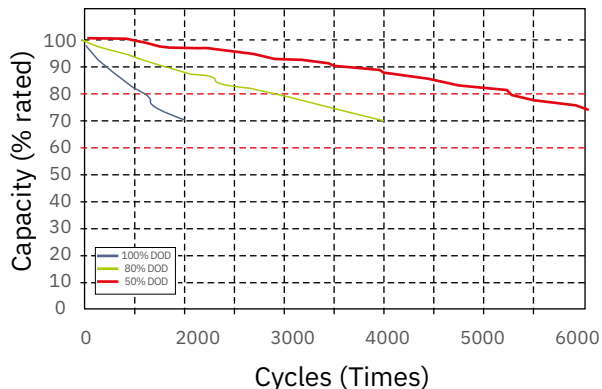
Measurements



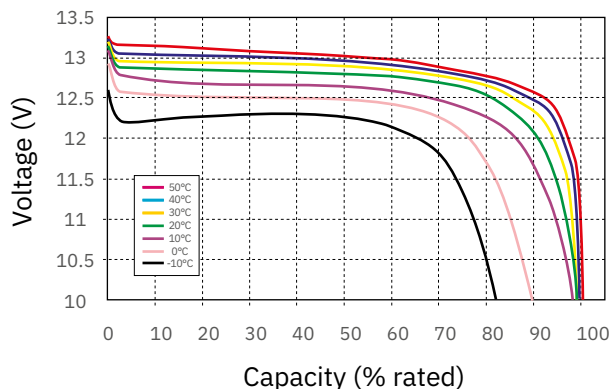
Compliance

Certifications	CE (Battery) UN38.3 (Battery) RoHS
Shipping Classification	UN 3480, CLASS 9

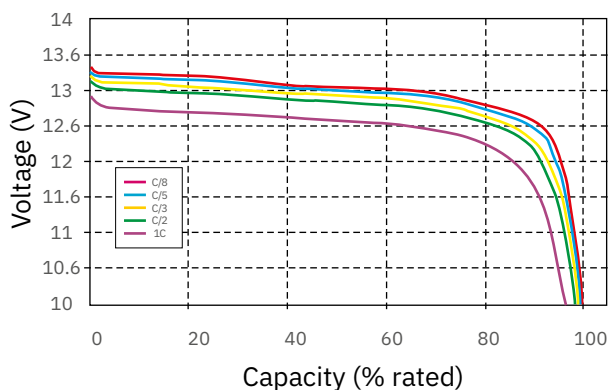
**Cycle Life vs. Depth of Discharge (DOD)
Discharge 0.5C / Charge 0.5C (25°C)**



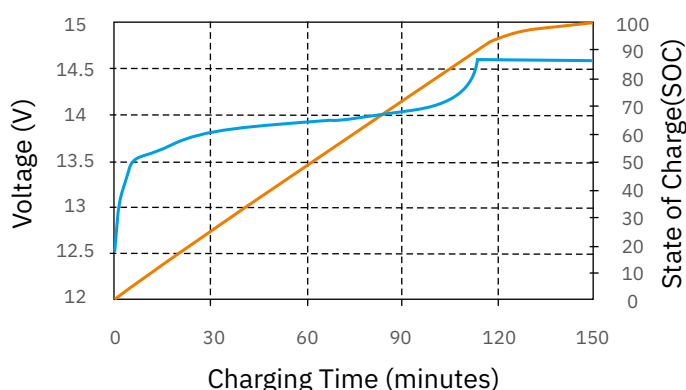
**Discharge Voltage Profiles at 0.5C Discharge Rate
(Various Ambient Temperatures)**



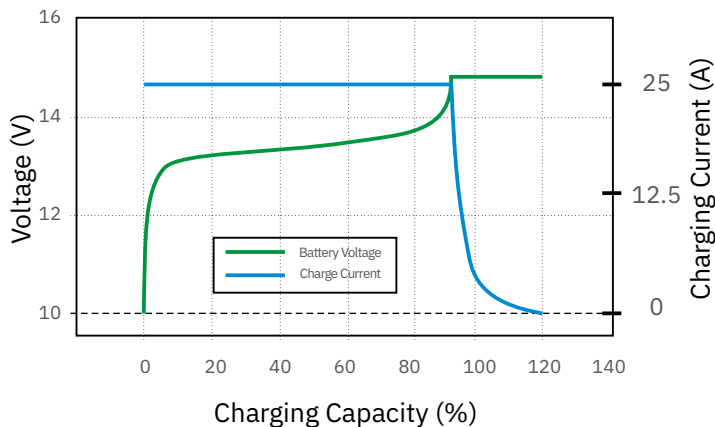
Discharge Voltage Profiles at Various Rates (25°C Ambient Temperature)



**Typical Voltage and SOC Profiles at 0.5C Charging
(25°C Ambient Temperature)**



Charging Characteristics (0.5C at 20°C)



Constant Power Discharge Characteristics (25°C Ambient Temperature)

