

LC 50L

LiFePO₄ Lithium Battery
12.8V | 50Ah | 640Wh



Electrical Specifications

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

Discharge Specifications

Max. Continuous Discharge Current	50A
Peak Discharge Current	65A (15 ± 5s)
BMS Discharge Cut-Off Current	85A (3s)
Recommended Low Voltage Disconnect	8.2 to 11.2V
BMS Discharge Cut-Off Voltage	> 10V (2.5V per cell)
Reconnect Voltage	> 11.2V (2.8V per cell)
Short Circuit Protection	200 to 600µs

Charge Specifications

Recommended Charge Current	≤25A
Maximum Charge Current	50A
Recommended Charge Voltage	14.6V
BMS Charge Cut-Off Voltage	15V (3.75V per cell)
Reconnect Voltage	<14.4V (3.6V per cell)
Float Charge Voltage	13.8V
Maximum Batteries in Series	4

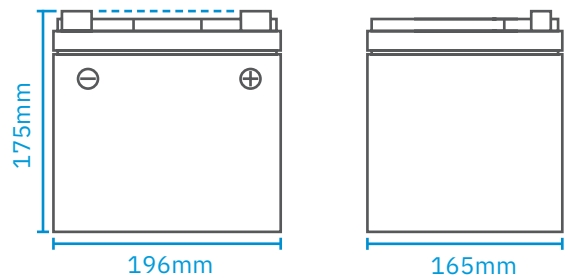
Mechanical Specifications

Measurements (L × W × H)	196 × 165 × 175mm
Approx. Weight	6.8 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	-10 to 45°C
BMS High Temperature Cut-Off	65°C
Reconnect Temperature	50°C

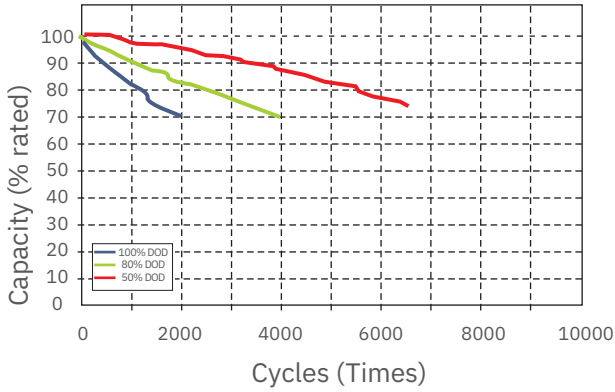
Measurements



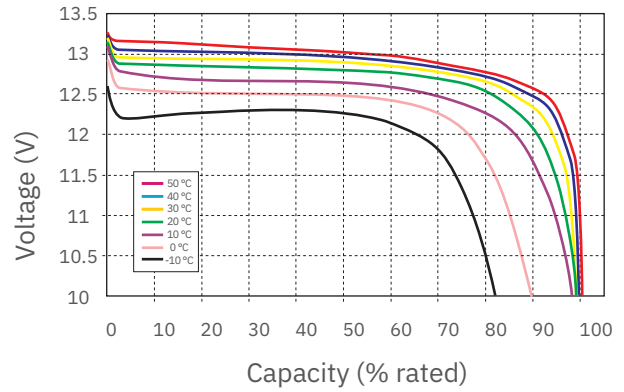
Compliance

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

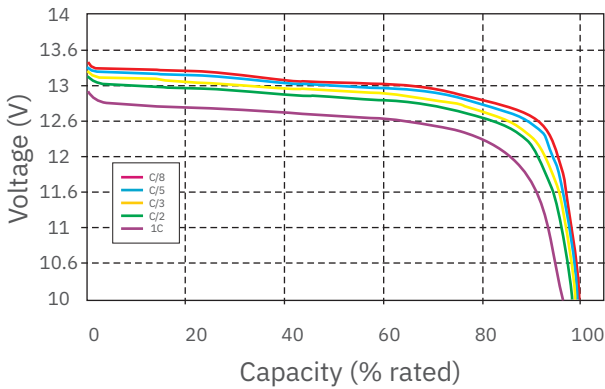
Cycle Life vs. Depth of Discharge (DOD)
Discharge 0.5C / Charge 0.5C (25°C)



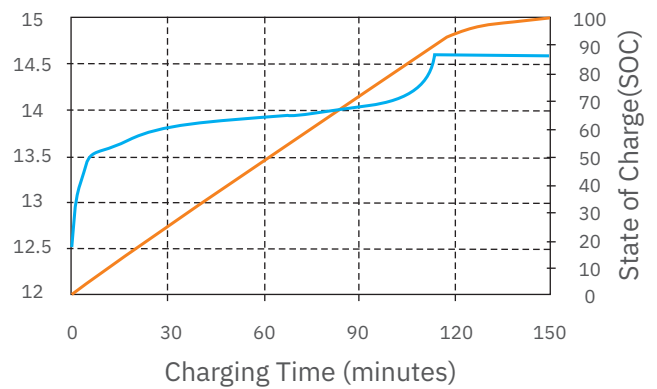
Discharge Voltage Profiles at 0.5C Discharge Rate
(Various Ambient Temperatures)



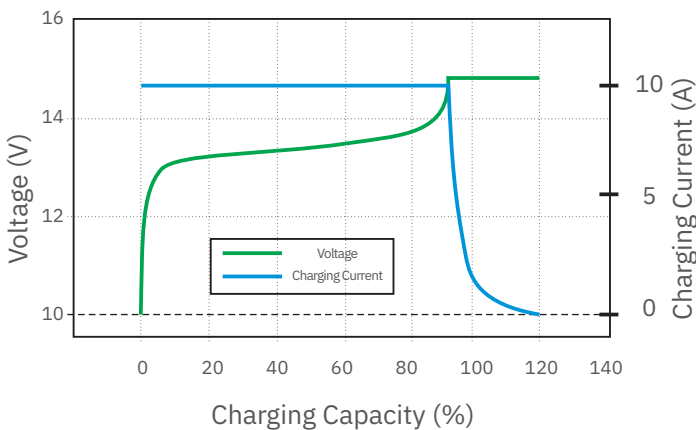
Discharge Voltage Profiles at Various Rates (25°C Ambient Temperature)



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)

