

LiFe 100-12SEV

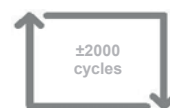
12V / 100Ah

Lithium - Iron Phosphate



Features

High energy density
Automatic protection with battery management system (internal)
Low self-discharge
Long cycle life
Excellent performance in all operating temperatures
Cost effective
Fast charge
Drop-in replacement
Guaranteed Safety



Nominal characteristics

Nominal Voltage	: 12.8V
Nominal capacity	: 100Ah
Energy	: 1280Wh
IR	: $\geq 12\text{m}\Omega$ @100% SOC
Efficiency	: $\geq 99.5\%$
Maximum Modules in Series	: 2 (Single Use)

Mechanical characteristics

Case Material	: ABS
Dimensions (LxWxH)	: 306x169x215 mm
Weight	: 10.3kg $\pm 3\%$
Terminal Type	: F12 (M8)
BCI Group	: 27
Cell Type-Chemistry	: Prismatic LiFePO ₄

Charge & discharge characteristics

Voltage Window	: 10.8-14.6V
Max. Continuous Charge	: 100A
Max. Continuous Discharge	: 100A
Peak Discharge Current	: 200A (15s $\pm 2\text{s}$)
Recomm. Charge Current	: 50A
Recomm. Discharge Current	: 50A

Operating Conditions

Cycle Life	: ≥ 2000
Operating Temperature	: Charge 10°C ~ 45°C Discharge -20°C ~ 55°C
Storage Temperature	: 20°C ~ 30°C
Storage Duration	: 12 months at 25°C

BMS characteristics

Primary Charging Protection	: Current >105 $\pm 2.5\text{A}$ Delaytime 15 $\pm 2\text{s}$
Secondary Charging Protection	: Current >120 $\pm 2.5\text{A}$ Delaytime 2 $\pm 1\text{s}$
Primary Discharging Protection	: Current >105 $\pm 2.5\text{A}$ Delaytime 20 $\pm 1\text{s}$
Secondary Discharging Protection	: Current >210 $\pm 2.5\text{A}$ Delaytime 1 $\pm 1\text{s}$
Over-charge Voltage Protection	: Voltage >14.8 $\pm 0.2\text{V}$ Delaytime 2 $\pm 0.5\text{s}$
Over-discharge Voltage Protection	: Voltage <9.6 $\pm 0.2\text{V}$ Delaytime 2 $\pm 0.5\text{s}$
Temperature Protection ($\pm 2\text{s}$)	: PCB Temp. $\geq 95^\circ\text{C}$ Recover $\leq 75^\circ\text{C}$

Constant Current Discharge Data (Amp @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	100A	50A	33.3A	20A	10A

Constant Power Discharge Data (Watt @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	1150W	580W	388W	234W	118W

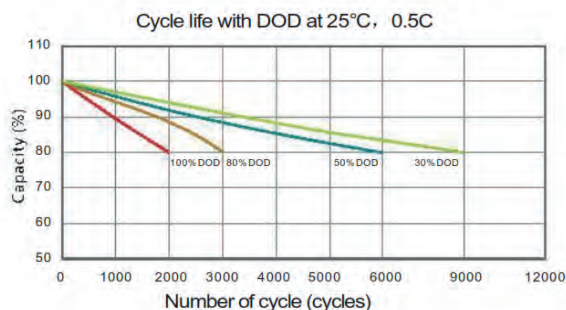
LiFe 100-12SEV

12V / 100Ah

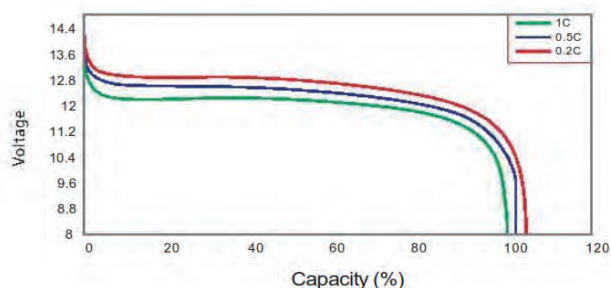
Lithium - Iron Phosphate



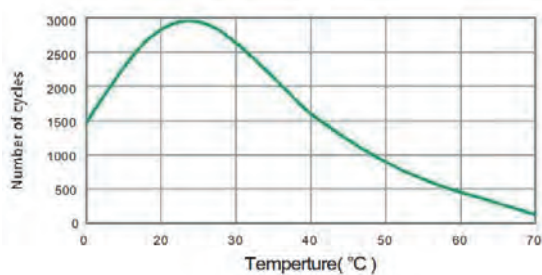
Number of Cycles Vs. DOD



Discharge Performance at R.T.

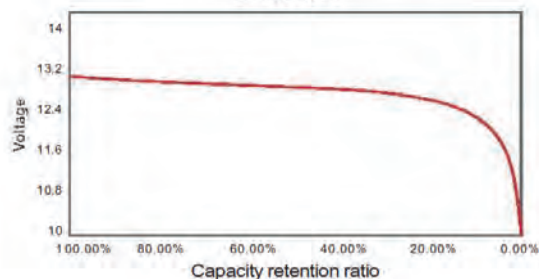


Cycle Life in Relation to Temperature



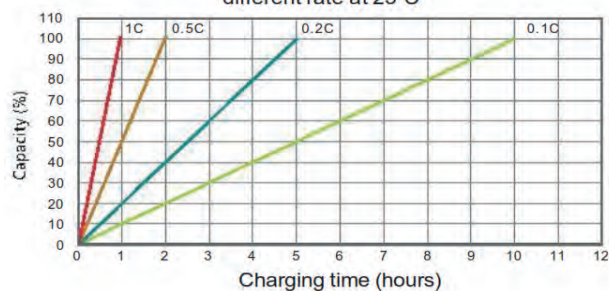
Battery Capacity (C) Vs. Open Circuit Voltage (OCV)

SOC Vs OCV



Battery Capacity Vs. Charging Time

Charging capacity(%) VS time with different rate at 25°C



Temperature Effects on Capacity

