LiFe 50-12

12V / 50Ah

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	:	50Ah
Energy	:	640Wh
IR	:	≥23mΩ @100% SOC
Efficiency	:	≥99.5%
Maximum Modules in Series	:	2 (Single Use)

Mechanical characteristics

Case Material	:	ABS
Dimensions (LxWxH)	:	229x138x213 mm
Weight	:	8kg ±3%
Terminal Type	:	F11 (M6)
BCI Group	:	22
Cell Type-Chemistry	:	Prismatic $LiFePO_4$

Charge & discharge characteristics

Voltage Window	:	10.8-14.6V
Max. Continuous Charge	:	50A
Max. Continuous Discharge	:	50A
Peak Discharge Current	:	100A (10s ±1s)
Recomm. Charge Current	:	25A
Recomm. Discharge Current	:	25A

BMS characteristics

Primary Charging Protection	:	Current	60~70A
		Delaytime	15 ±2s
Secondary Charging Protection	:	Current	≥70A
		Delaytime	3 ±2s
Primary Discharging Protection	:	Current	78~105A
		Delaytime	15 ±2s
Secondary Discharging Protection	:	Current	105~170A
		Delaytime	5 ±2s
Over-charge Voltage Protection	:	Voltage	≥14.8V
	:	Delaytime	1~2s
Over-discharge Voltage Protection	:	Voltage	≥9.6V
	:	Delaytime	3s
Temperature Protection	:	PCB Temp.	≥90°C
		Recover	≤65°C

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

Constant Current Discharge Data (Amp @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	50A	25A	17A	10A	5A

Constant Power Discharge Data (Watt @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	576W	291W	196W	119W	60W

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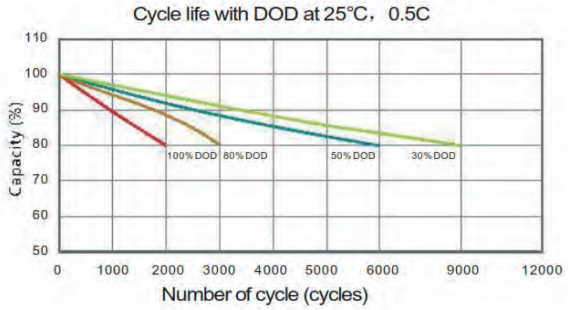
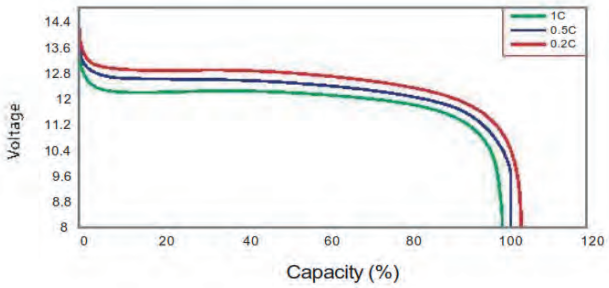
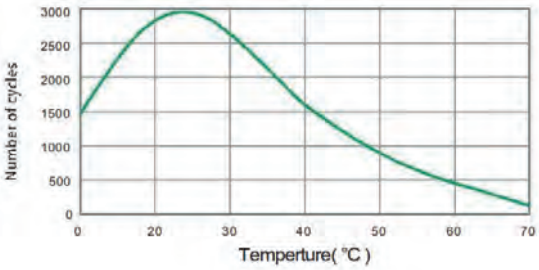
Number of Cycles Vs. DOD



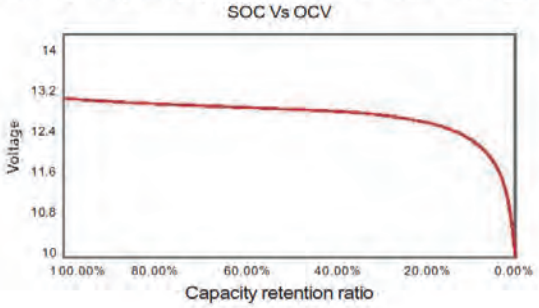
Discharge Performance at R.T.



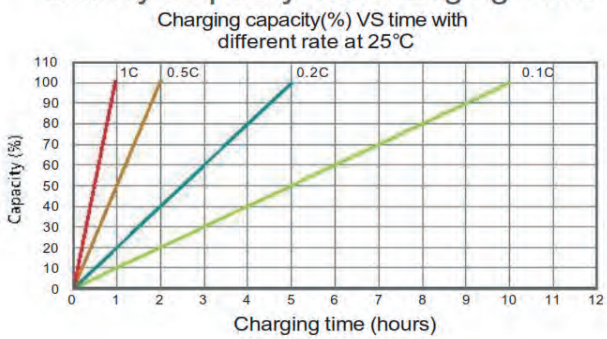
Cycle Life in Relation to Temperature



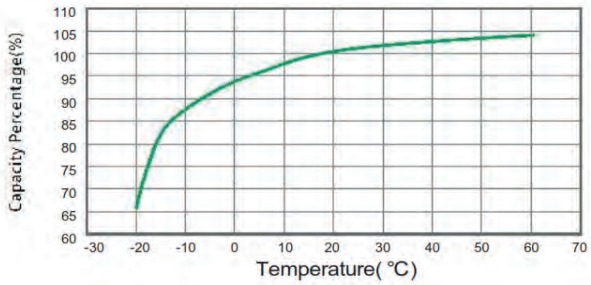
Battery Capacity (C) Vs. Open Circuit Voltage (OCV)



Battery Capacity Vs. Charging Time



Temperature Effects on Capacity



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