

LiFe 50-24

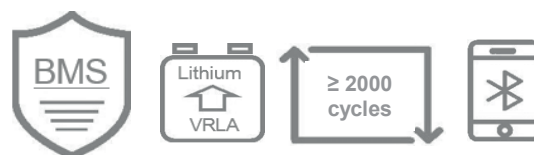
24V / 50Ah

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	: 25.6V
Nominal capacity	: 50Ah
Energy	: 1280Wh
IR	: $\geq 15\text{m}\Omega$ @100% SOC
Efficiency	: $\geq 99.5\%$
Maximum Modules in Series	: 1 (Single Use)

Mechanical characteristics

Case Material	: ABS
Dimensions (LxWxH)	: 330x172x220 mm
Weight	: 10.8kg $\pm 3\%$
Terminal Type	: F12 (M8)
BCI Group No.	: 31
Cell Type-Chemistry	: Prismatic LiFePO ₄

Charge & discharge characteristics

Voltage Window	: 21.6 - 29.2V
Max. Continuous Charge	: 50A
Max. Continuous Discharge	: 50A
Peak Discharge Current	: 80A ($\geq 10\text{s}$)
Recomm. Charge Current	: 25A
Recomm. Discharge Current	: 25A

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	55~65A
	: Delaytime	30 $\pm 2\text{s}$
Secondary Charging Protection	: Current	$\geq 65\text{A}$
	: Delaytime	2 $\pm 1\text{s}$
Primary Discharging Protection	: Current	55~85A
	: Delaytime	15 $\pm \text{s}$
Secondary Discharging Protection	: Current	80~150A
	: Delaytime	2 $\pm 1\text{s}$
Over-charge Voltage Protection	: Voltage	$\geq 30.4\text{V}$
	: Delaytime	1~2s
Over-discharge Voltage Protection	: Voltage	$\geq 18.4\text{V}$
	: Delaytime	1~2s
Temperature Protection	: PCB Temp.	$\geq 80^\circ\text{C}$
	: Recover	$\leq 65^\circ\text{C}$

Constant Current Discharge Data (Amp @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (21.6V)	50A	25A	16.6A	10A	5A

Constant Power Discharge Data (Watt @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (21.6V)	1267W	647W	435W	263W	134W

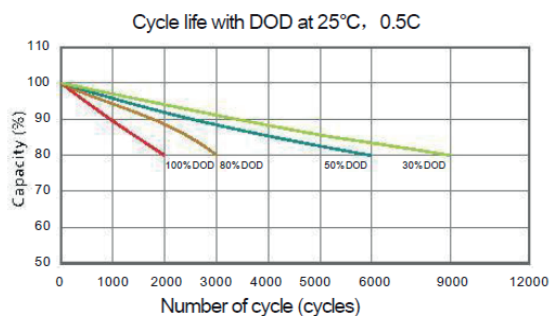
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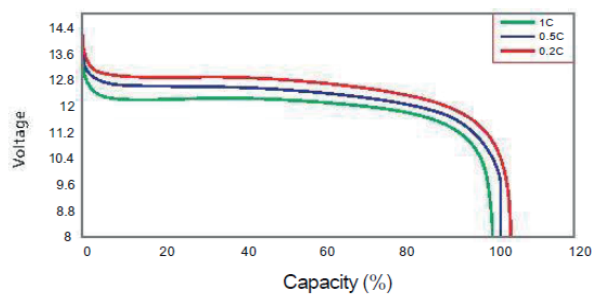
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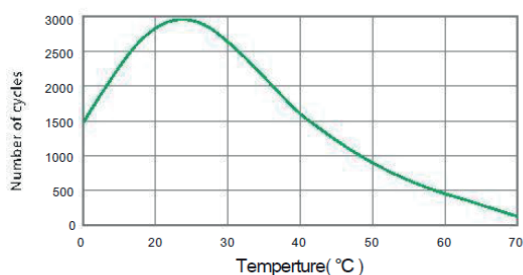
Number of Cycles Vs. DOD



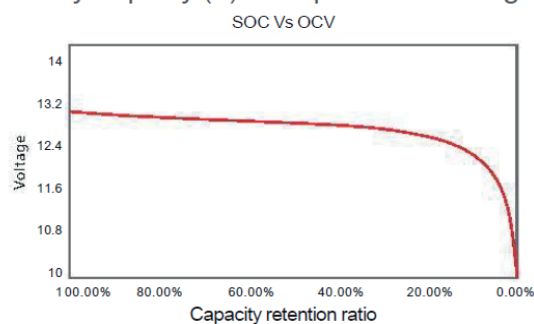
Discharge Performance at R.T.



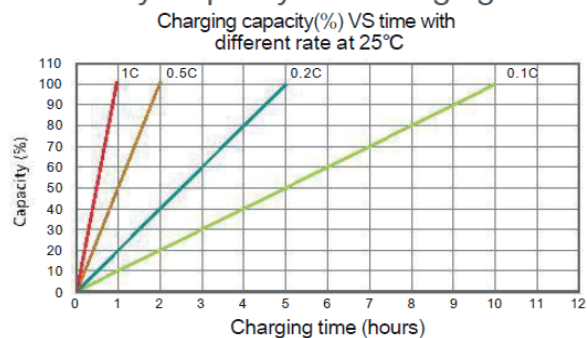
Cycle Life in Relation to Temperature



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



Battery Capacity Vs. Charging Time



Temperature Effects on Capacity

