

LiFe 10-12

12V / 10Ah

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	: 10Ah
Energy	: 128Wh
IR	: $\geq 45\text{m}\Omega$ @100% SOC
Efficiency	: $\geq 99.5\%$
Maximum Modules in Series	: 2 (Single Use)

Mechanical characteristics

Case Material	: ABS
Dimensions (LxWxH)	: 151x65x100 mm
Weight	: 1.5kg $\pm 3\%$
Terminal Type	: F2
IP Grade	: -
Cell Type-Chemistry	: Prismatic LiFePO ₄

Charge & discharge characteristics

Voltage Window	: 10.8-14.6V
Max. Continuous Charge	: 10A
Max. Continuous Discharge	: 20A
Peak Discharge Current	: 35A (10s $\pm 1\text{s}$)
Recomm. Charge Current	: 5A
Recomm. Discharge Current	: 5A

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	25~35A
	: Delaytime	15 $\pm 2\text{s}$
Secondary Charging Protection	: Current	$\geq 35\text{A}$
	: Delaytime	3 $\pm 1\text{s}$
Primary Discharging Protection	: Current	30~40A
	: Delaytime	15 $\pm \text{s}$
Secondary Discharging Protection	: Current	40~86A
	: Delaytime	3 $\pm 1\text{s}$
Over-charge Voltage Protection	: Voltage	$\geq 14.8\text{V}$
	: Delaytime	$\leq 3\text{s}$
Over-discharge Voltage Protection	: Voltage	$\geq 9.2\text{V}$
	: Delaytime	$\leq 3\text{s}$
Temperature Protection	: PCB Temp.	$\geq 90^\circ\text{C}$
	: Recover	$\leq 65^\circ\text{C}$

Constant Current Discharge Data (Amp @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	10a	5a	3.3A	2A	1A

Constant Power Discharge Data (Watt @25°C)

	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	115w	58W	38.8W	23.4W	11.8W

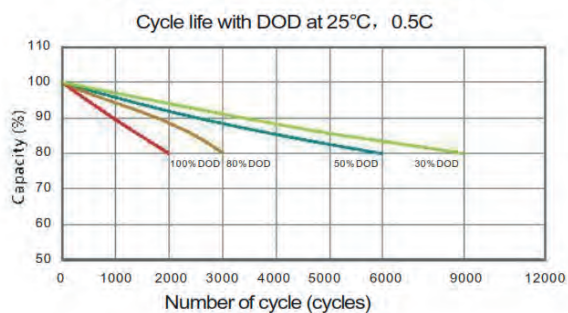
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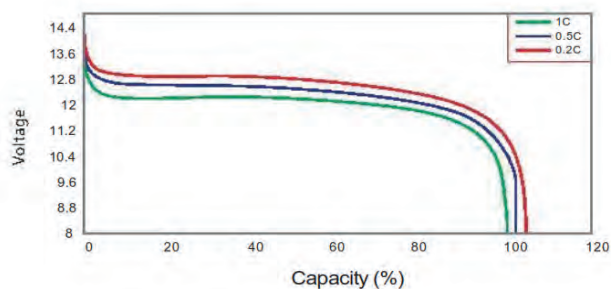
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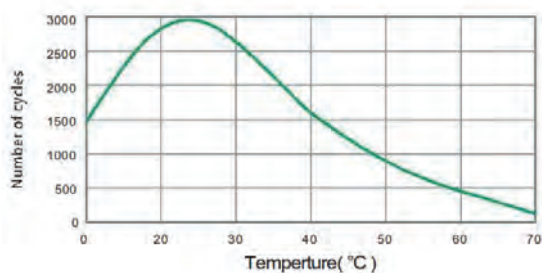
Number of Cycles Vs. DOD



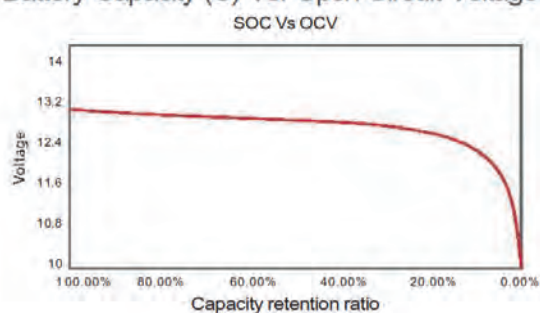
Discharge Performance at R.T.



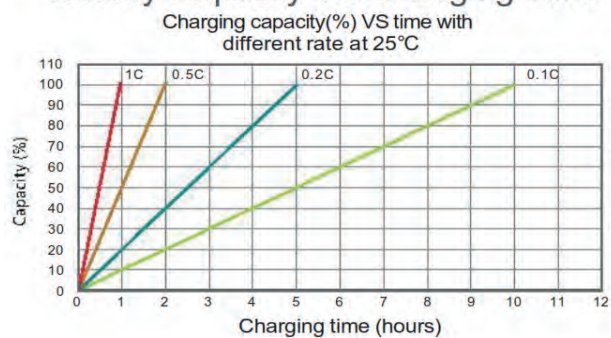
Cycle Life in Relation to Temperature



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



Battery Capacity Vs. Charging Time



Temperature Effects on Capacity

