



Iron-V

Specification: LFP12-20EV (12V 20Ah)

Iron-V Lithium Iron Phosphate Battery



Features

Cost
Effectiveness



Smart
Management



Longer
Service Life



Guaranteed
Safety



Fast Charge



Drop-in
Replacement



Performance characteristics

NORMAL CHARACTERISTICS

Normal Voltage	12.8 V
Normal Capacity	20Ah
Energy	256Wh
IR	≤10mΩ@100%SOC
Efficiency	≥99.5%
Maximum Modules in Series	2 (Single Use)

CHARGE & DISCHARGE CHARACTERISTICS

Voltage window	10.8-14.6V
Max. continuous charge current	20A
Max. continuous discharge current	20A
Peak Discharge Current	45~80A (15s±2s)

OPERATING CONDITIONS

Cycle life	≥2000
Operating temperature	Charge: 0°C~60°C Discharge: -30°C~60°C
Storage temperature	C~30°C
Storage duration	12 months at 25°C
Heating function	/

MECHANICAL CHARACTERISTICS

Case Material	ABS
Dimension (L*W*H)	181*75*165
Weight	3.16KG
Terminal Type	F13
IP grade	/
BCI Group NO.	22
Cell Type-Chemistry	Presimetic LiFePO4

BMS CHARACTERISTICS

Primary Charging Protection	Current: 40~60A Delay time: 13~17S
Secondary Charging protection	Current: ≥60A Delay time: 1~4S
Primary Discharging Protection	Current: 45A~85A Delay time: 15S
Secondary Discharging protection	Current: ≥133A Delay time: 150mS
Overcharge voltage protection	Voltage: 14.8V Delay time: ≤3S
Over-discharge voltage protection	Voltage: 9.6V Delay time: ≤3S
Temperature protection	PCB temperature ≥90°C Recover ≤65°C
Communicating function	/



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Constant current discharge data (Amperes & @25°C)

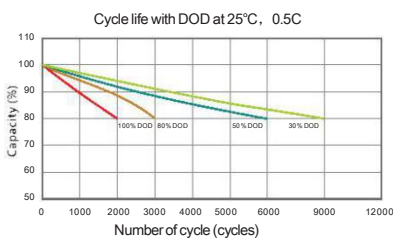
	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	20A	10A	6.3A	4A	2A

Constant power discharge data (Watt & @25°C)

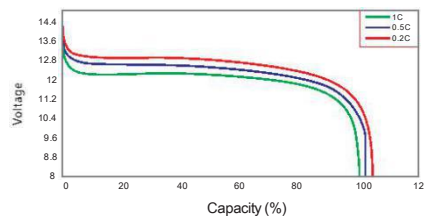
	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	230w	116.5	78.5	47.5	24W

Cycle No. Vs DOD%

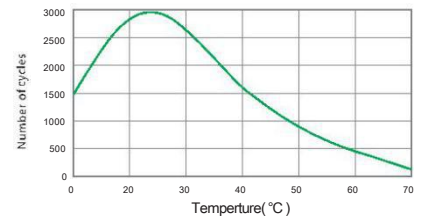
Number of Cycles Vs. DOD



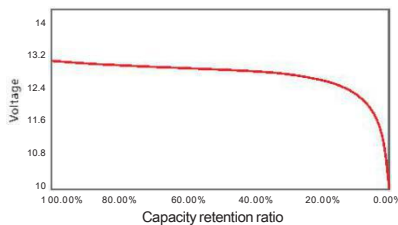
Discharge Performance at R.T.



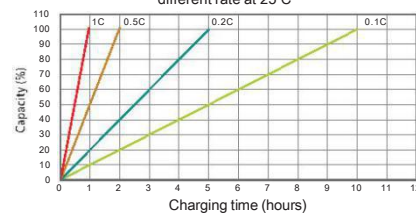
Cycle Life in Relation to Temperature



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

