



Iron-V

LFP12-10EV (12V 10Ah) Specification

Iron-V Lithium Iron Phosphate Battery



Attentions:

- When the battery needs to be used in parallel or in series, each battery shall be fully charged according to the standard charging method before parallel or in series.
- When the battery is discharged empty. It should be recharged in time. Otherwise the BMS can't work due to low voltage, and the battery will be permanently invalidated.

Features

Cost Effectiveness



Longer Service Life



Guaranteed Safety



Fast Charge



Drop-in Replacement



Technical Characteristics

NORMINAL CHARACTERISTICS

Nominal Voltage	12.8 V
Nominal Capacity	10Ah
Energy	128Wh
IR	≤45mΩ@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	10A
Max. Continuous Discharge Current	20A
Peak Discharge Current	35A (10s)
Recommended charge current	5A
Recommended discharge current	5A
Charge current cut-off	0.3A

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

MECHANICAL CHARACTERISTICS

Case Material	ABS
Dimension (L*W*H)	151*65*100
Weight	1.27Kg±5%
Terminal Type	F2
IP Grade	/
BCI Group NO.	/
Cell Type-Chemistry	Cylindrical LiFePO ₄

BMS CHARACTERISTICS

Primary Charging Protection	Current: 25~35A Delay time: 15±2S
Secondary Charging Protection	Current: ≥35A Delay time: ≤3s
Primary Discharging Protection	Current: 30A~40A Delay time: 15±2S
Secondary Discharging Protection	Current: >40A Delay time: ≤3s
Over-charge Voltage Protection	Voltage: >14.8±0.2V Delay time: ≤3s
Over-discharge voltage protection	Voltage: <9.6±0.2V Delay time: ≤3s
High Temperature Protection	Charging: 65±3°C Recover: 60±3°C Discharging: 65±3°C Recover: 60±3°C
Low Temperature Protection	Charging: 0±3°C Recover: 3±3°C Discharging: -20±3°C Recover: -15±3°C

Constant Current Discharge Data (Amperes@25°C)

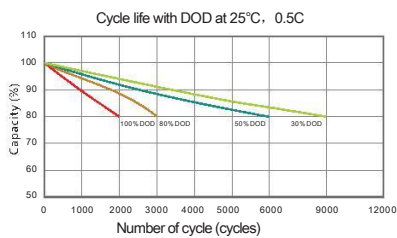
	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	10A	5A	3.3A	2A	1A

Constant Power Discharge Data (Watt@25°C)

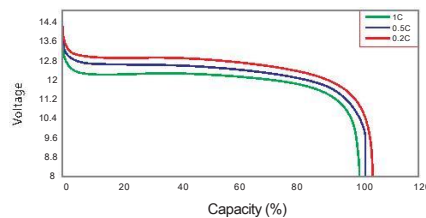
	1h	2h	3h	5h	10h
Cut-off voltage (10.8V)	115W	58W	38.8W	23.4W	11.8W

Cycle No. Vs DOD%

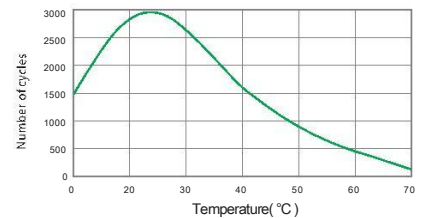
Number of Cycles Vs. DOD



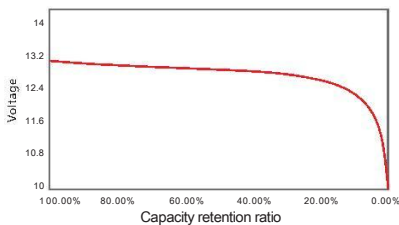
Discharge Performance at R.T.



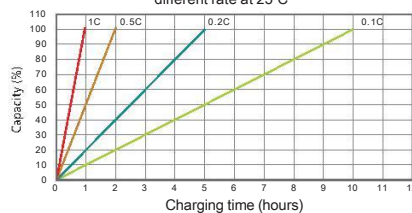
Cycle Life in Relation to Temperature



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

