



ML 280-51.2

LiFePo4 Lithium Battery

Marvel lithium series batteries provide superior performance, capacities, and reliability. Using state of high-power cell technology, the lithium series is designed for environmentally sensitive areas that require enhanced cycle life capabilities in commercial.

Marvel lithium batteries are widely used in industrial, residential, commercial, and private applications. The maintenance-free construction and advanced design features make the lithium series the definitive choice for various markets. Like solar and renewable energy storage, electric vehicles, golf carts, and industrial equipment, floor machines, forklifts, aerial lifts, and robotics; marine, RV, and no-idle solutions; Mobility and Medical Equipment; Telecom, Broadband, and Cable TV; UPS systems.



Battery Specifications

Battery type-Chemistry	LiFePO4
Nominal Voltage	51.2V
Nominal Capacity	280Ah
Energy Density	14336Wh
Voltage Window	43.2V-58.4V
Recommend Charge Voltage	57.6V
Max Charge Voltage	58.4V
Recommend Charge Current	140A
Max Continuous Current	150A
Recommend Discharge Voltage	44.8V
Max Discharging Voltage	43.2V
Max Continuous Discharge Current	150A
Peak Discharge Current	200A
Cycle life (25°C@80% DOD)	6000 Cycles
Discharge Temperature	(- 20 to 55)°C
Charge Temperature	(0 to 55)°C
Storage Temperature	(- 20 to 45)°C
AH Efficiency – round trip	>98%
Self Discharge per Month	<3%
Max in Parallel	16PCS
Max in Series	Not Allowed
BMS build-in	Yes
Bluetooth (App)	Optional
LCD Screen	Optional
WIFI function	Optional
Case Material	SPCC
Dimensions (LxWxH)	897x413.4x233mm
Weight	114.3KGS
Terminal Type	Plug-in
Terminal Torque	8.5NM

BMS Characteristics

Primary Charging Protection Current	155A	Delay Time	20s
Second Charging Protection Current	160A	Delay Time	2~3s
Primary Discharging Protection Current	155A	Delay Time	10s
Second Discharging Protection Current	200A	Delay Time	100ms
Over Charge Voltage Protection Voltage	58.4V	Delay Time	1~2s
Over Discharge Voltage Protection Voltage	43.2V	Delay Time	Delay Time

PCB

Temperature Protection

Temperature

$\geq 95^{\circ}\text{C}$

Recover

$\leq 85^{\circ}\text{C}$

Communication Port

Major RS485, optional for CAN / Dry port, customized acceptable

Constant Current Discharge Data (Amperes @ 25°)

Discharge Time	1h	2h	3h	4h	5h	10h	20h
Cut off voltage (22.4V)	-	140A	93.3A	70A	56A	28A	14A

Constant Power Discharge Data (Watts @ 25°C)

Discharge Time	1h	2h	3h	4h	5h	10h	20h
Cut off voltage (22.4V)	-	7168W	4779W	3584W	2867W	1434W	717W