

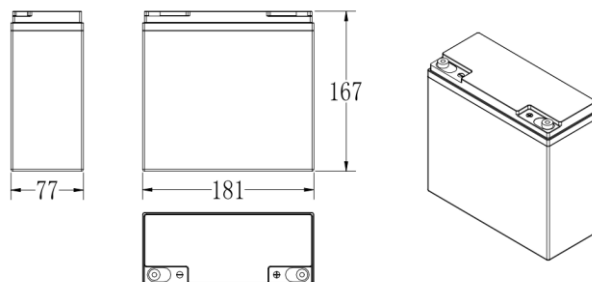
TP1220LFP lithium LiFePO<sub>4</sub> battery pack

TOPAK TP series lithium ion battery is a powerful LiFePO<sub>4</sub> battery product, has the highest capacity in a standard casing available on the market. The highly sophisticated and integrated BMS with very low self consumption, brings safety, functionality and ease of use together in a lightweight and robust casing. The batteries has been especially designed to provide energy for RV (Recreational Vehicles), Marine, Energy storage, etc. Bluetooth and LED indicators, LCD screen, self-heated functions could be optional.



**Benefits of Lithium**

- High capacity, low weight, increased energy in given space
- Fast charging
- High operational reliability
- Safest lithium technology
- Excellent long life times
- Built-in intelligent BMS to protect the battery pack at any time and prolong its service life
- Maintenance free



**Certifications and standards**

**a. Products**

- UL1642(cells)
- FCC
- UN38.3
- IEC62619

**b. MS certifications**

- ISO9001
- ISO14001
- OHSAS 18001

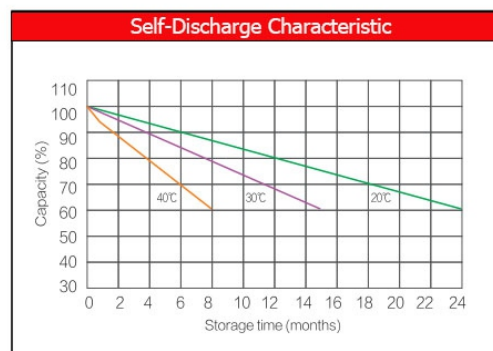
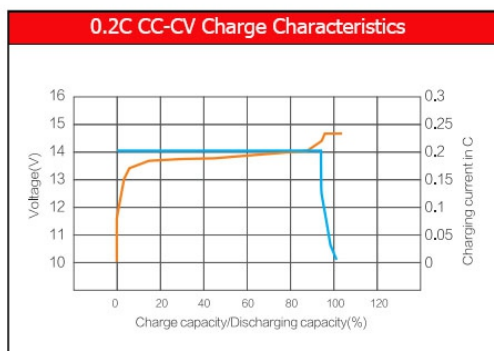
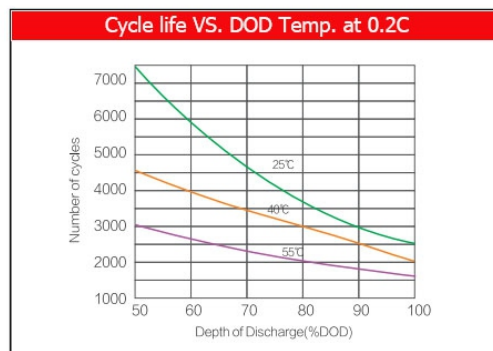
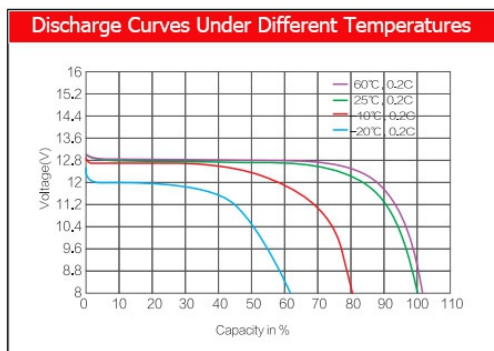
**Specifications**

Nominal Characteristic		
Battery model		TP1220LFP
Nominal voltage		12.8V
Typical capacity		20Ah(25°C, 0.2C)
Typical energy		256Wh
Cells type/chemistry		Prismatic-LiFePO <sub>4</sub>
Gravimetric Energy density		111Wh/Kg
Dimensions	Length	181mm
	Width	77mm
	Height	167mm
Reference Weight		2.3Kg
Case Material		ABS
Cycle life		>2000 cycles(100% DoD)
Electric Characteristics		
Charge method		CC/CV
Charge voltage Range		14.3~14.6V
Max.continuous Discharge Current		20A
Max.continuous Charge Current		20A
Discharge Pulse Current (10 sec)		50A
End of Discharge Voltage		10V
Operation Environment		
Charge Temperature		0°C~55°C
Discharge Temperature		-20°C~60°C
Storage Temperature		-20°C~60°C
Protection Class		IP65

**BMS specifications**

ITEM	CONTENT	CRITERION
Voltage	Charging voltage	3.65V/cell
	Balance voltage	3.45V/cell
Current	Max continues charge current	20A
	Max continues discharge current	20A
Over charge Protection	Over charge detection voltage	3.75±0.05V
	Over charge detection delay time	1~3S
	Over charge release voltage	3.6±0.05V
Over discharge Protection	Over discharge detection voltage	2.5±0.05V
	Over discharge detection delay time	1~3S
	Over discharge release voltage	2.70±0.10V
Over current protection	Over discharge current protection	50A
	Detection delay time1	50~150mS
	Over charge current detection current	40A
	Detection delay time	300~800mS
Short Circuit Protection	Short Circuit Protection Current	130A, External short circuit
	Detection delay time	400uS
	Release condition	Cut load and charging
Battery temperature	Over-temperature protection	65±5°C
	Release temperature	50±5°C

**Performance curve**



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