### **TOPAK**<sup>®</sup> www.topakpower.com

## TP24100LFP lithium LiFePO<sub>4</sub> battery pack

TOPAK TP series lithium ion battery is a powerful LiFePO₄ 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)

IEC62619

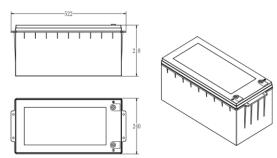
- FCC
- UN38.3

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- b.MS certifications
- ISO9001
- ISO14001
- OHSAS 18001
- Specifications

Nominal Characteristic     Battery model   TP24100LFP     Nominal voltage   25.6V     Typical capacity   100Ah(25°C,0.2C)     Typical energy   2560Wh     Cells type/chemistry   Prismatic-LiFePQ,     Gravimetic Energy density   107Wh/Kg     Dimensions   Length   522mm     Midth   240mm     Height   218mm     Reference Weight   24Kg     Case Material   ABS     Cycle life   >2000 cycles(100% DoD)     Elertic Characristics   2000 cycles(100% DoD)     Elertic Characristics   CC/CV     Charge method   CC/CV     Charge voltage Range   100A     Max.continuous Discharge Current   100A     Discharge Voltage   200A     End of Discharge Voltage   10V     Operation Environment   0°C ~55°C     Charge Temperature   -20°C ~60°C     Storage Temperature   -20°C ~60°C     Storage Temperature   -20°C ~60°C     Storage Temperature   -20°C ~60°C			
Nominal voltage     25.6V       Nominal voltage     25.6V       Typical capacity     100Ah(25°C,0.2C)       Typical energy     2560Wh       Cells type/chemistry     Prismatic-LiFePO,       Gravimetic Energy density     107Wh/Kg       Dimensions     Length     522mm       Width     240mm     240mm       Paismatic-LiFePO,     240mm     240mm       Case Material     24Kg     240mm       Case Material     ABS     2000 cycles(100% DoD)       Electric Characristics     2000 cycles(100% DoD)     2000 cycles(100% DoD)       Electric Characristics     CC/CV     2000 cycles(100% DoD)       Charge method     CC/CV     2000 cycles(100% DoD)       Electric Characristics     2000 cycles(100% DoD)     2000 cycles(100% DoD)       Segne voltage Range     10.0A     2000A     2000 cycles(100% DoD) <t< td=""><td>Nominal Characteristic</td><td></td><td></td></t<>	Nominal Characteristic		
Typical capacity   100Ah(25°C,0.2C)     Typical energy   2560Wh     Cells type/chemistry   Prismatic-LiFePO <sub>4</sub> Gravimetic Energy density   107Wh/Kg     Dimensions   Length   522mm     Width   240mm     Height   218mm     Reference Weight   24Kg     Case Material   ABS     Cycle life   >2000 cycles(100% DoD)     Electric Characristics   2400m     Charge method   CC/CV     Charge nothod   CC/CV     Max.continuous Discharge Current   100A     Max.continuous Charge Current   100A     Discharge Pulse Current (10 sec)   200A     End of Discharge Voltage   10V     Operation Environment   0°C ~55°C     Discharge Temperature   -20°C ~60°C     Storage Temperature   -20°C ~60°C	Battery model		TP24100LFP
Typical energy2560WhCells type/chemistryPrismatic-LiFePO,Gravimetic Energy density107Wh/KgDimensionsLength Width 240mm 240mm 248mmReference Weight24KgCase MaterialABSCycle life>2000 cycles(100% DoD)Electric CharacristicsCC/CVCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100AMax.continuous Charge Current100ADischarge Pulse Current (10 sec)200AEnd of Discharge Voltage0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Nominal voltage		25.6V
Cells type/chemistryPrismatic-LiFePQ4Gravimetic Energy density107Wh/KgDimensionsLength Width 240mm HeightDimensionsLength 240mm 240mm HeightReference Weight24KgCase MaterialABSCycle life>2000 cycles(100% DoD)Electric Characristics24KgCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100ADischarge Voltage100ADischarge Voltage10VOperation Environment10VCharge Temperature0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Typical capacity		100Ah(25℃,0.2C)
Gravimetic Energy density107Wh/KgDimensionsLength Width Height522mm 240mm 218mmReference Weight24KgCase MaterialABSCycle life>2000 cycles(100% DoD)Electric CharacristicsCC/CVCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100ADischarge Pulse Current (10 sec)200AEnd of Discharge Voltage10VOperation Environment0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Typical energy		2560Wh
DimensionsLength Width Height522mm 240mm 240mmReference Weight24KgCase MaterialABSCycle life>2000 cycles(100% DoD)Electric Characristics>2000 cycles(100% DoD)Electric CharacristicsCC/CVCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100ADischarge Pulse Current (10 sec)200AEnd of Discharge Voltage10VOperation Environment0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Cells type/chemistry		Prismatic-LiFePO₄
DimensionsWidth Height240mm 218mmReference Weight24KgCase MaterialABSCycle life>2000 cycles(100% DoD)Electric Characristics>2000 cycles(100% DoD)Electric CharacristicsCC/CVCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100AMax.continuous Charge Current100ADischarge Pulse Current (10 sec)200AEnd of Discharge Voltage10VOperation Environment0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Gravimetic Energy density		107Wh/Kg
Case MaterialABSCycle life>2000 cycles(100% DoD)Electric CharacristicsCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100AMax.continuous Charge Current100ADischarge Pulse Current (10 sec)200AEnd of Discharge Voltage10VOperation Environment°C~55°CCharge Temperature°C~60°CStorage Temperature-20°C~60°CStorage Temperature-20°C~60°C	Dimensions	Width	240mm
Cycle life>2000 cycles(100% DoD)Electric CharacristicsCC/CVCharge methodCC/CVCharge voltage Range14.3~14.6VMax.continuous Discharge Current100AMax.continuous Charge Current100ADischarge Pulse Current (10 sec)200AEnd of Discharge Voltage10VOperation EnvironmentCharge Temperature0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Reference Weight		24Kg
Electric Characristics     Charge method   CC/CV     Charge voltage Range   14.3~14.6V     Max.continuous Discharge Current   100A     Max.continuous Charge Current   100A     Discharge Pulse Current (10 sec)   200A     End of Discharge Voltage   10V     Operation Environment   0°C~55°C     Discharge Temperature   0°C~60°C     Storage Temperature   -20°C~60°C	Case Material		ABS
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Discharge Pulse Current (10 sec) 200A 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	Max.continuous Discharge Current		100A
End of Discharge Voltage   10V     Operation Environment   0°C~55°C     Charge Temperature   0°C~60°C     Storage Temperature   -20°C~60°C	Max.continuous Charge Current		100A
Operation EnvironmentCharge Temperature0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	Discharge Pulse Current (10 sec)		200A
Charge Temperature0°C~55°CDischarge Temperature-20°C~60°CStorage Temperature-20°C~60°C	End of Discharge Voltage		10V
Discharge Temperature -20°C~60°C   Storage Temperature -20°C~60°C	Operation Environment		
Storage Temperature -20°C~60°C	Charge Temperature		0°C~55℃
	Discharge Temperature		-20℃~60℃
Protection Class IP65	Storage Temperature		-20℃~60℃
	Protection Class		IP65





# TP24100LFP

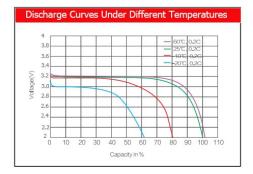


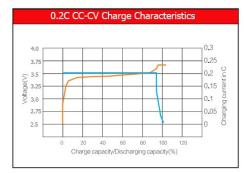
## **TP24100LFP**

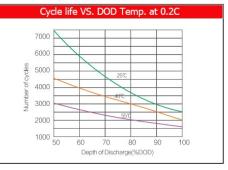
#### **BMS** specifications

ITEM	CONTENT	CRITERION
Voltage	Charging voltage Balance voltage	3.65V/cell 3.45V/cell
Current	Max continues charge current Max continues discharge current	100A 100A
Over charge Protection	Over charge detection voltage Over charge detection delay time Over charge release voltage	3.75±0.05V 1~3S 3.6±0.05V
Over discharge Protection	Over discharge detection voltage Over discharge detection delay time Over discharge release voltage	2.5±0.05V 1~3S 2.70±0.10V
Over current protection	Over discharge current protection Detection delay time1 Over charge current detection current Detection delay time	400A 500~1500mS 160A 300~800mS
Short Circuit Protection	Short Circuit Protection Current Detection delay time Release condition	1680A,External short circuit 400uS Cut load and charging
Battery temperature	Over-temperature protection Release temperature	65±5℃ 50±5℃

#### Performance curve









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