

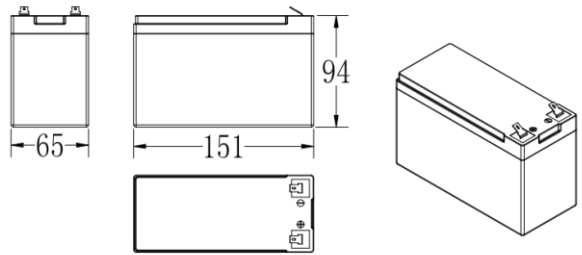
TP1210LFP lithium LiFePO<sub>4</sub> battery pack

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

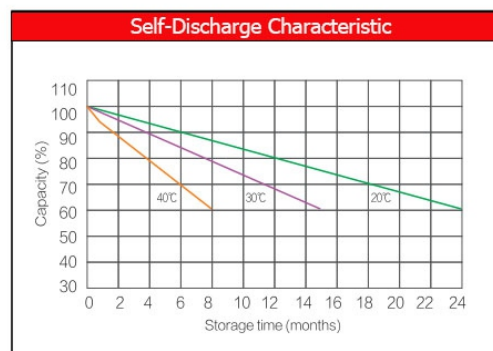
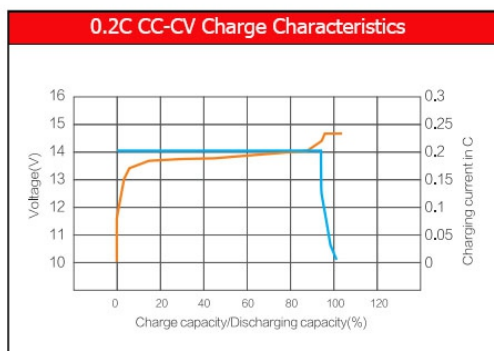
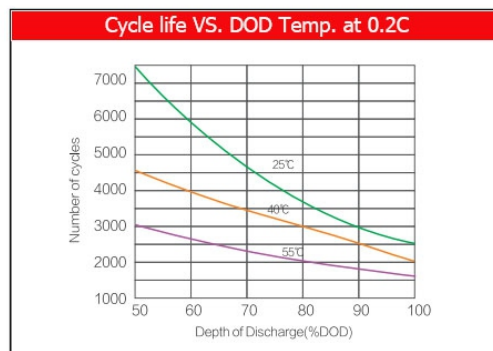
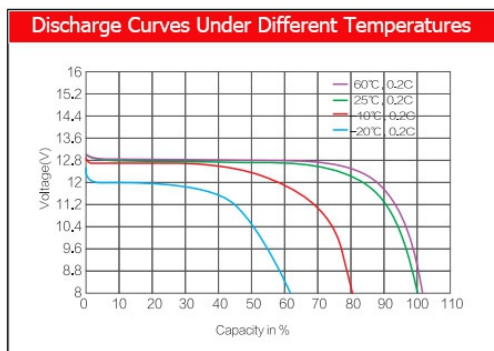
**Specifications**

| Nominal Characteristic            |        |                               |
|-----------------------------------|--------|-------------------------------|
| Battery model                     |        | TP1210LFP                     |
| Nominal voltage                   |        | 12.8V                         |
| Typical capacity                  |        | 10Ah(25°C, 0.2C)              |
| Typical energy                    |        | 128Wh                         |
| Cells type/chemistry              |        | Prismatic-LiFePO <sub>4</sub> |
| Gravimetric Energy density        |        | 106Wh/Kg                      |
| Dimensions                        | Length | 151mm                         |
|                                   | Width  | 65mm                          |
|                                   | Height | 94mm                          |
| Reference Weight                  |        | 1.2Kg                         |
| 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 |        | 10A                           |
| Max. continuous Charge Current    |        | 10A                           |
| Discharge Pulse Current (10 sec)  |        | 20A                           |
| 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          | 10A                          |
|                           | Max continues discharge current       | 10A                          |
| 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     | 33A                          |
|                           | Detection delay time1                 | 50~150mS                     |
|                           | Over charge current detection current | 14A                          |
|                           | 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℃                        |
|                           | Release temperature                   | 50±5℃                        |

**Performance curve**



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