

Technical Guide for Lithium-ion Prismatic 340948 Cell

1. DESCRIPTION

- Components: LiNi/CoO₂ cathode, non-aqueous liquid electrolyte, proprietary carbon anode
- Dimensions (Max): 34.2mm x 8.5mm (edge)* x 48.0mm
*Bulge in the middle measures 9.0mm max at 23°C and 9.5mm max at elevated temperatures
- Weight: 38 g
- Capacity: 1200 mAh
- Nominal voltage: 3.7 V
- Operating voltage range: 4.2 to 2.8 V
- Safety features of cell: Shutdown separator and rupture vent

2. OPERATING INSTRUCTIONS

CHARGE

- Recommended: Use a constant voltage charge to 4.20 ± 0.05 V with the charge current limited to 0.5 to 1.0 A; terminate charge when the current tapers to 0.02 A; redundant time out is 4 hours for 1.0 A charge
- Maximum charge current: 2.0 A.
- Charge time: Reduction to 2 hour with minor penalty in capacity; approx. 80% capacity after a 1 hour charge at 1.0 A
- Recommended temperature range: 0°C to 40°C.
 - Charging at lower temperatures will require longer charge times.

DISCHARGE

- Discharge modes: continuous or pulsed current, power or resistance
- Maximum discharge rate: 2.0 A
- Recommended discharge voltage: 2.8 to 3.1 V.
 - Discharge below 2.5 V should be avoided; reduced life and performance will result.
- Recommended temperature range: -20°C to 60°C.

STORAGE

- Storage temperature range: -20°C to 60°C.
- Recommended voltage range: 4.2 V to 2.8 V.
- Prolonged storage periods: store discharged and at low temperature.

3. PRECAUTIONARY NOTES

- PolyStor's Lithium-ion cells have very high power and energy density. Exercise common sense precautions when handling or testing.
- All battery packs must incorporate PTC devices (Raychem VTP210 or equivalent) and a pack protection circuit to ensure the highest level of safety and reliability.
- CAUTION: fire, explosion and severe burn hazard. DO NOT short circuit, overcharge, crush, mutilate, nail penetrate, incinerate, reverse polarity, heat above 100° C or disassemble.
- The PolyStor 340948 cell is a UL recognised component, however battery packs fabricated from the cells are only eligible for recognition after evaluation of the pack by Underwriters Laboratories.
- PolyStor must pre-approve the use of its products in medical applications and will not support their use in Class III medical applications.