

EVE Lithium Ion Rechargeable Battery

Model PLM1550

1. Scope

This specification apply to AA size Lithium Ion Rechargeable battery supplied by EVE Energy Co., Ltd.

Notice: Charging circuit and application load profile have to be approved by EVE prior to the use of this cell.

2. Mechanical characteristics

Physical:

Length: 50.5mm Max

Diameter: 15.1mm Max

Weight: 20.0±0.2 gr

Cell Protection: Cell maximum discharge current is limited by PTC a follows:

PLM1550A/S1: by SRP 120 – 1.2A

PLM1550A/S1: by SRP 200 – 2.0A

3. Electrical characteristics

Electrical/Charge:

Charge Voltage: 4.1V

Charge Current: 100mA Max

Charge Method: CCCV(Constant Current/Constant Voltage)

End of Charge: 5mA Max. per cel

Charge Temp. Range: 0 to +45°C (Charge temperature can be extended to -40 to +85°C provided that the max. charge current is limited to 20mA)

Electrical/Discharge: 250 mA

Nominal Current: 2.5 V @ Room Temperature

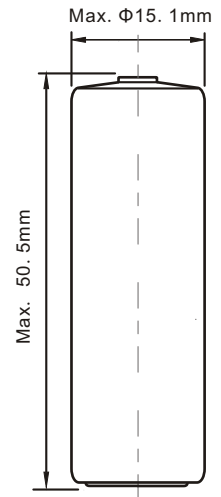
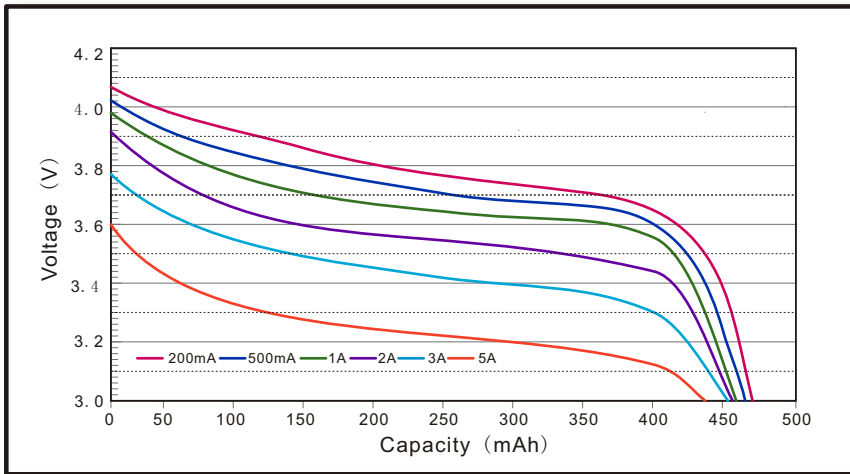
End of Discharge: -40 to +85°C

Item	Performance	Condition
Battery Capacity	450[mAh] 400[mAh]	Discharge at 100mA Discharge at 1000mA
Charge Discharge Cycle	400[mAh]	After 100 cycles Discharge at 250mA
Temperature	400[mAh] 400[mAh]	Discharge at -20°C at 250mA Discharg at 60°C at 250mA
Impedance	Less than 100mohm	Impedance at RT @ 1kHz

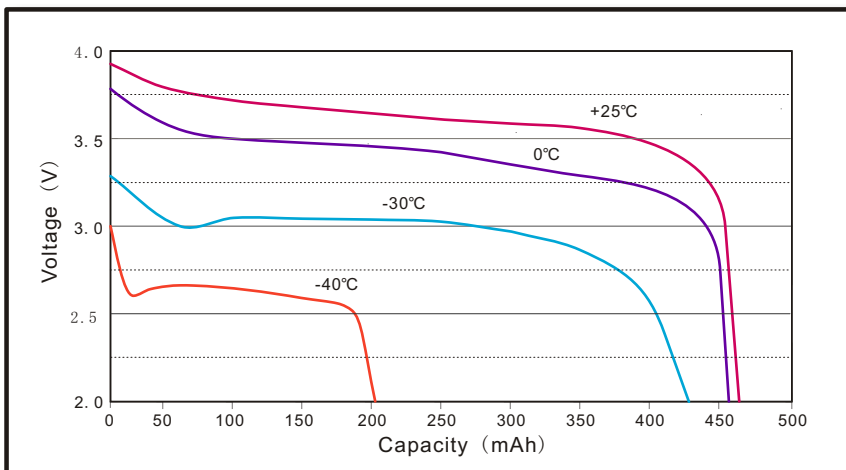
Note: RT, Charge Voltage 4.1V, and discharge Voltage 3.0V.

Model PLM1550

3.1 PLM1550 Discharge curve at Room Temperature

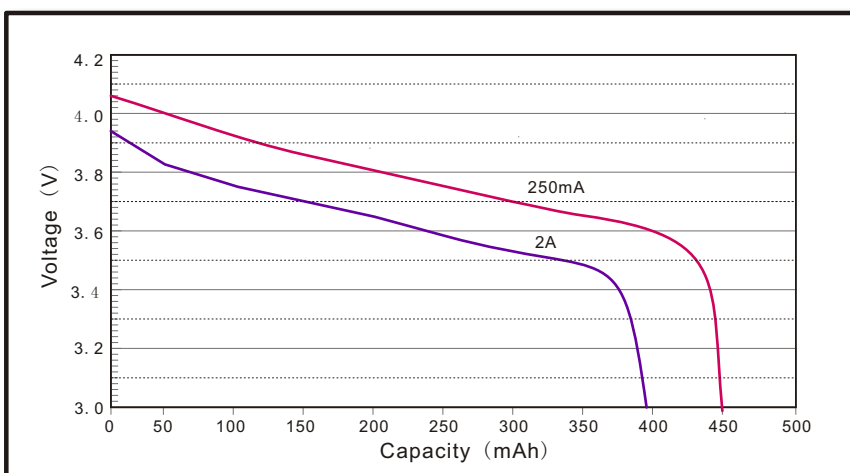


3.2 PLM1550 Discharge curve at Several Temperature, 2A

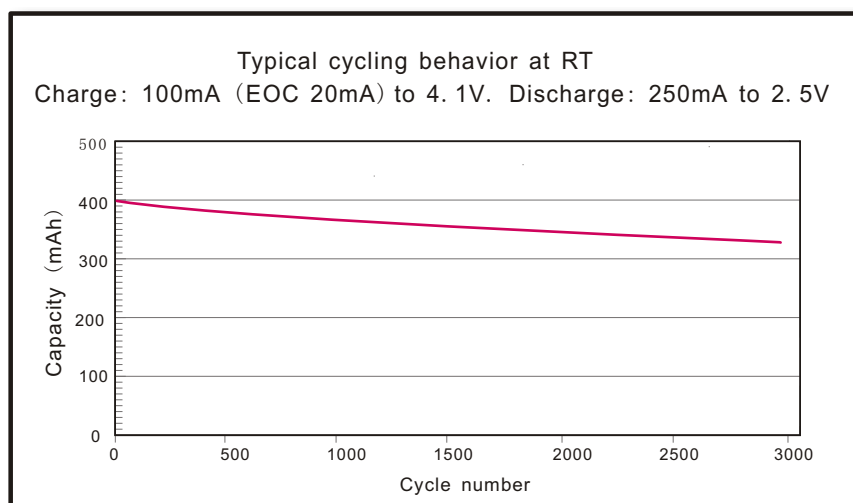


PLM1550 Cell Dimensions

3.3 PLM1550 Discharge curve at 80°C Temperature



3. 4 Charge/ Discharge Cycling Performance



4. Cell / Battery Protection (to be applied by the user)

Item	Specifications
Over charge protection	Cell voltage should not be higher than 4.2V
Over discharge protection	Cell voltage should not be lower than 2.4V

5. Safety Characteristics

The cells successful passed the following safety tests:

- Short circuit at RT, +55°C and 85°C.
- Temperature test up to 130°C.
- Crush.
- Impact.
- Nail penetration.
- Over charge up to 1.5A, 4.6V.

6. Battery pack assembly and usage considerations

- For 2 cells or more in series, voltage shall be monitored on each cell.
- For more than 2 cells in parallel, maximum charge current shall be limited to 250mA for the whole pack.

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