ECO GMBH

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SPEC. NO.	40106	ISSUE DATE		2020-7-2	
DESCRIPTION	Lithium-Fe Battery (model No. 40106)	EDITION	D	PAGE	1/4

1. Applicability

The specification is applicable to Eco Lithium-Fe Rechargeable batteries (Eco model no. : 40106).

2. Ratings

2.1 Cell

2.1.1 Type of cell : Sealed Lithium-Fe cylindrical Rechargeable battery
2.1.2 Cell model : YL IFR16340A50AJ
2.1.3 Cell size : 16340
2.1.4 Cell typical capacity : 500mAh
2.1.5 Cell minimum capacity : 470mAh
2.1.6 Number of cell used : 1PCS

2.2 Pack

2.2.1 Rated voltage : 3V
2.2.2 Typical capacity : 500mAh
2.2.3 Minimum capacity : 470mAh
2.2.4 Standard charge : 100mA x 5.5hrs with 3.6V
2.2.5 Rapid charge : 250mA x 3hrs with 3.6V
2.2.6 Maximum charge current : 500mA
2.2.7 Maximum continuous discharge current: 500mA
2.2.8 Discharge end voltage : 2.0V
2.2.9 Replace No. : Primary CR123,CR123A
2.2.10 Battery Pack Color : Dark Blue
2.2.11 Operating temperature :

- 0 – 45℃ (standard charging)
- 10 - 45℃ (quick discharging)
- -20 - 60℃ (standard discharging)

2.2.12 Storage temperature :

- -20 - 45℃ (1 month)
- -20 - 40℃ (6 months)
- -20 - 35℃ (1 year)

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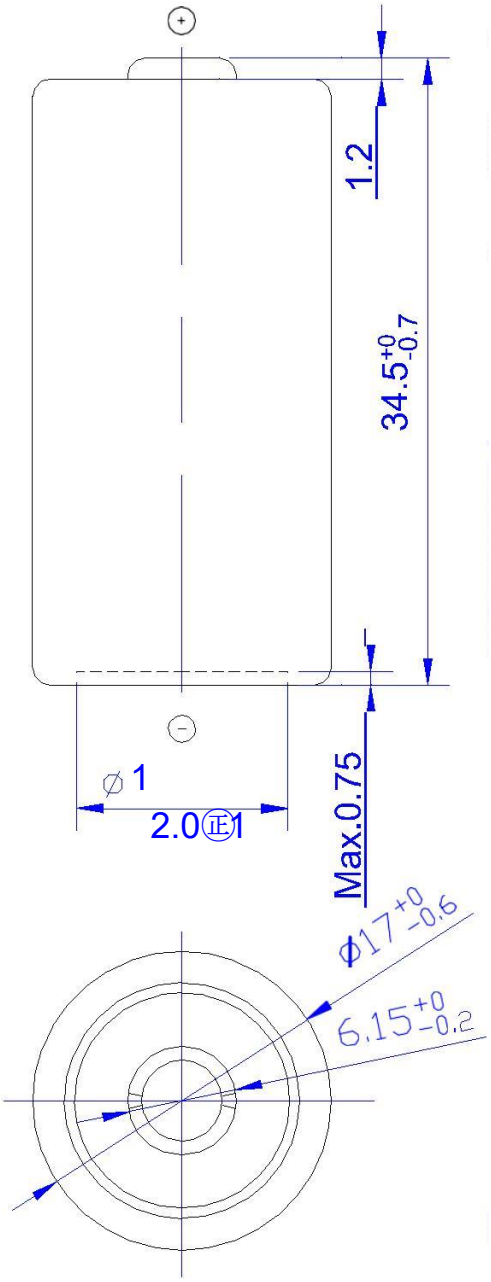
3. Configuration and dimensions



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4. Test conditions

Unless otherwise specified, all tests should be conducted within one month of delivery under the following conditions :

- Ambient temperature : 20 +/- 5℃.
- Relative humidity : 65 +/- 20%.

5. Performance

Item	Criteria	Test conditions
Capacity	Above 470mAh	Standard charge and standard discharge
Internal impedance	Less than 180mohm	Measure AC impedance at 1kHz
Cycle life **	Above 329mAh	1500 cycles charging/discharging is repeated in the below condition. ● Charging: 250mA to 3.6V ● Rest time: 30min ● Discharging: 250mA to 2.0V ● Temperature: 25±2℃
Leakage resistance	No leakage	Visually inspect battery pack after standard charge and storage at 25℃ for 14 days.
Drop test	No fire, no explosion, no leakage (max. weight loss 0.1%)	Drop battery pack after standard charged onto a bakelite floor from a height of 1m for 6 times.
Vibration test	No fire, no explosion, no leakage (max. weight loss 0.1%)	The battery pack is vibrated in triaxial direction with 4 mm amplitude of frequency 30 Hz for 1 minute in each direction.
Short circuit test	No fire, no explosion, cell temperature shall not exceed 150℃	External short circuit
Dimensions	Refer to drawing of FR123	Measured by calipers
Battery weight	Approx. 17g	Measured by balance
Appearance	No crack, no leakage, no deformation	Visual inspection

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Note: ** Data provided under "Cycle Life" in this document is our best estimate based on the technical data supplied by battery cell manufacturer in the Product Specification Form.

6. Warranty

One year limited warranty against workmanship and material defects. Manufacturer reserves the right to alter, amend the design, model and specification without prior notice.

7. Charge state of cell before shipment

Charge from 10% to 50% according to delivery condition.

8. Safety precaution

Please follow the safety precaution carefully as improper handling of Lithium Fe batteries may result in injury or damage from electrolyte leakage, heating ignition or explosion. To ensure safety, consult with manufacturer regarding the charge and discharge specifications,
equipment structure, warning labels and other important details when designing equipment to use manufacturer rechargeable Lithium Fe batteries.

Never charge the battery above 3.6V.
Never reverse charge the battery.
Never heat or incinerate the battery.
Never pierce, crush or cause mechanical damage to the battery.
Never charge a battery at high temperature condition, such as at or near a fire.
Never short circuit the battery.
Never discharge a battery to below 2.0V per cell.
Never allow the battery to get wet or be immersed in water.
For long period of storage, temperature should be below 45℃.
After long period of storage, battery may required some cycling to recover capacity.