Technical Documentation for Performance and Durability Requirements

Light Means of Transport Battery

According to Article 10 of (EU) 2023/1542

Name: Rechargeable Li-ion Battery
Model: BT F034.B522.C
Ratings: 36V,14.5Ah,522W

No.	Technical parameters	Parameter value	Test Condition & Method
1	Rated capacity(Ah) 14.5Ah	14Ah or above	Step 1: fully discharge the battery with constant current 3A to 27V. Step 2: fully charge the battery with constant current 3 A to 42V, then charge with constant voltage 42 V until charge current decrease to 0.25A. Step 3: repeat the step 1, and record the capacity obtained.
2	Capacity fading (%)	Less than 0.05 % Every time	Capacity fading means that the amount of power a battery can provide at rated voltage decreases over time or usage. the capacity fading is measured by method (last time full discharge capacity/first full discharge capacity)*100% , the fading is based on after 600 charge and discharge cycles or 30 months of storage
3	Power(W)	104W at 20% SOC, 412 W at 80% SOC. 185%	At 20% SOC (20% and 80%), The Power obtained by method: present discharge current*36V Ratio between nominal battery power (W) and battery energy (Wh).
4	Power fading (%)	0%	After 600 charge and discharge cycles or 30 months of storage, the power fading is measured by Discharge at maximum discharge current and continue for more than 10S
5	Internal resistance (mΩ)	≤120 mΩ	AC method/DC method: cell resistance+BMS resistance
6	Internal resistance increase (%)	0.04%/10 every cycle	the internal resistance increase is measured by method from cell specification the result is based on 600 charge and discharge cycles or 30 months of storage.
7	Energy round trip efficiency (%)	95% or above	Test method: (present discharge capacity *36)/(last time discharge capacity*36V)*100%
8	Energy round trip efficiency fading (%)	0.16%/10 every cycle	Energy round trip efficiency fading is measured by method 0.16%/10 every cycle The result is based on 600 cycle life tests or 30 months of use.
9	Expected life-time in cycle-life	600 cycles or above 2.5 years using	The remaining capacity is above 70% to rated capacity after 600 times charge-discharge cycles is conducted. Test method:20 cycles every month ,2.5 years.

Note:

1. Test Ambient temperature: 23± 5 ℃.
2. Cycle-life test condition:
   a) Charge:Constant Current Constant Voltage mode, 42V,3 A, Cut off at 250 mA
   b) Rest: 20minute
   c) Discharged: Constant Current mode, 3 A, Cutoff at 27 V
   d) Rest: 60minute
   e) Repeat a)-d)

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