

1. 적용범위 (Pack)

Scope

본 사양서는 (주)이젠에서 제조하는 (주)삼성전자 향 EGI-D3S1P(3S1P_ICP544382A) Model의 리튬-이온 Battery Pack에 대하여 적용한다

This specification shall be applied to the Lithium ion Battery Pack of EGI-D3S1P(3S1P_ICP544382A) Model for Samsung Electronics Co.,Ltd manufactured by EGEN Inc.

2. 일반 사양

GENERAL SPECIFICATION

NO.	항목/ Item	규격 및 조건/ Specification or Condition		
2.1	Cell maker	▷ Li-ion ICP544382A Cell/SAMSUNG SDI		
2.2	용량(25℃)/ Capacity	Nominal	2300mAh	0.2C Discharge to 8.25V at 25℃ (After charged at 13.2V-1400mA for 3hrs)
2.3	전압(25℃)/ Voltage	공칭전압/ Nominal voltage		11.55V
2.4	ID 저항/ Identification Resistor	--		
2.5	IR(내부저항)(25℃)/ Internal Resistance	300 mΩ 이하/ Less than 300 mΩ		
2.6	표준충전(25℃)/ Standard charge	▷ 충전전압/Charging Voltage : 12.6V ± 0.1V ▷ 충전전류/Charging Current : 1400mAh ▷ 충전시간/Charging time : 3hours		
2.7	표준방전/ Standard discharge	▷ 방전전류/Discharging current : 560mAh ▷ 방전 Cut-off 조건/ Condition of discharging cut-off voltage : 8.25V		
2.8	최대방전전류(25℃)/ Maximum continuous discharge current	▷ 연속방전 가능한 최대전류(25℃)/ Maximum current being able to discharge the battery continually(25℃)		2.8A
2.9	CCCV / Charging constant Current voltage	0.3V0이하(0.1sec/0.5C)/ Less than 0.3V(0.1sec/0.5C)		
2.10	DCCV / Discharging Constant current voltage	0.3V0이하(0.1sec/0.5C)/ Less than 0.3V(0.1sec/0.5C)		

NO.	항목/ Item	규격 및 조건/ Specification or Condition
2.11	Short & Recovery	▷ Short time : 0.1sec 이하/Less than 0.1sec ▷ Recovery voltage : 11.55V 이상/More than 11.55V
2.12	무게/ Weight	182.7g ± 5%

3. PCM 특성

PCM CHARACTERISTICS

NO.	항목/ Item	규격 및 조건/ Specification or Condition
3.1	과 충전 검출 전압/ Over charge detection voltage	4.25V ± 0.025V/Cell
3.2	과 방전 검출 전압 / Over discharge detection voltage	2.75V ± 0.25V/Cell
3.3	과 충전 검출 전류(25℃)/ Over charge detection current	2.8A 이상
3.4	과 방전 검출 전류(25℃)/ Over discharge detection current	2.8A 이상
3.5	소비전류/ Consumption current	▷ Run mode : MAX 800 μ A ▷ Sleep mode : MAX 300 μ A ▷ Power down mode : MAX 5 μ A

4. 환경특성

ENVIRONMENTAL CHARACTERISTICS

NO.	항목/ Item	규격 및 조건/ Specification or Condition
4.1	동작 가능한 온도/ Operating Temperature	▷ 1400mA 충전 시/ 1400mA charging : 0~45℃ ▷ 560mA 방전 시/ 560mA discharging : -20~60℃
4.2	보관 가능한 온도/ Storage Temperature	▷ 1개월 / A Month : -20 ~ 60℃ ▷ 3개월 / 3 Month : -20 ~ 45℃ ▷ 12개월 / A Year : -20 ~ 25℃

5. 수명시험

CYCLE LIFE TEST

- ▷ 배터리 팩은 충.방전을 500회 실시한다. 충전은 CC-CV(2300mA-12.6V, 230mA cut-off) 조건으로 실시하고, 방전은 2300mA로 9.0V까지 방전한다.
100Cyc, 300Cyc, 500Cyc 때 충전(560mA-12.6V, 170mA cut-off)하고 560mA로 8.25V까지 방전하여 그 용량을 측정한다.

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Spec. No.	ICP544382A	Version No.	0.0
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SPECIFICATIONS

1. Scope

This product specification has been prepared to specify the rechargeable lithium-ion cell ('cell') to be supplied to the customer by Samsung SDI Co., Ltd.

2. Description and Model

2.1 Description	Cell (lithium-ion rechargeable cell)
2.2 Model	ICP544382A

3. Standard Specifications

Item	Specification
3.1 Nominal Capacity	2800mAh (0.2C, 2.75V cut-off discharge)
3.2 Charging Voltage	4.4V
3.3 Nominal Voltage	3.85V
3.4 Charging Method	CC-CV (constant voltage with limited current)
3.5 Charging Current	Standard charge : 1400mA Rated charge : 560mA Rapid charge : 2800mA
3.6 Charging Time	Standard charge : 3hours Rated charge : 6hours Rapid charge : 2.5hours
3.7 Max. Charge Current	2800mA
3.8 Max. Discharge Current	2800mA
3.9 Discharge Cut-off Voltage	2.75V
3.10 Cell Weight	Max 44.2g
3.11 Cell Dimension	Thickness : Max. 5.43mm(Initial fully charged cell) Width : Max. 42.25mm Height : Max. 82.00mm
3.12 Operating Temperature	Charge : -5 to 55℃ Discharge: -20 to 55℃
3.13 Storage Temperature	1 year : -20~25℃(1*) 3 months : -20~45℃(1*) 1 month : -20~60℃(1*)
3.14 UL Recommend PTC	-

Note (1): If the cell is kept as ex-factory status (50~60% of Charge state), the capacity recovery rate is more than 80%.

(2): All items in the specification should be under the regular confirmation and quality management after mass-production.