

1. SCOPE

This specification describes the electrical, mechanical and environmental parameters for this battery pack consisting of a Lithium Ion cell 19.3V/ 1400 mAh, with protection safety circuit.

2. Dimensions:

- Thickness = 21 mm
- Width = 67 mm
- Length = 94 mm

3. Weight: 0.550lb

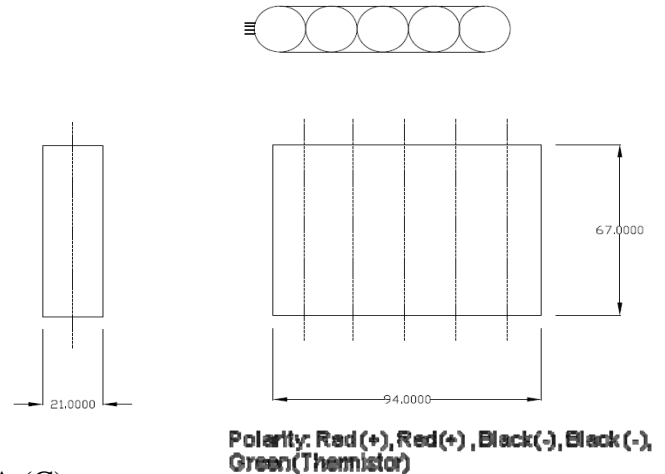
4. Cell specification: Li-ion Battery, 5S1P

4.1 Nominal voltage: 19.3V

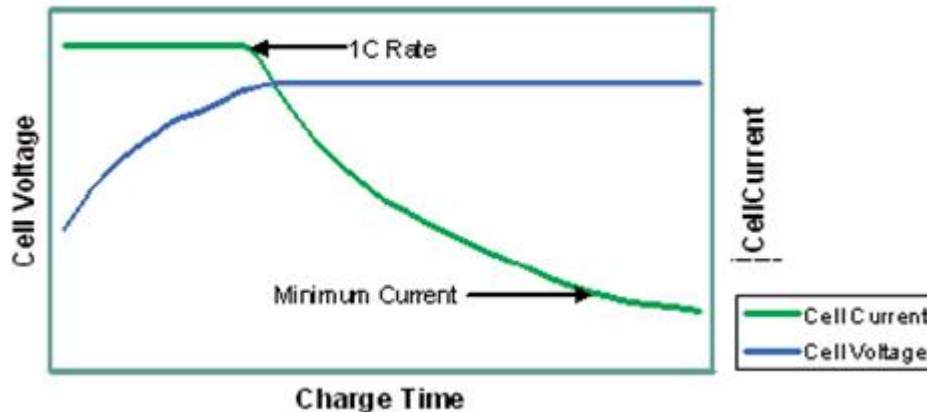
4.2 Capacity: Nominal 1400mAh at 23°C using:

- Charge profile of 21.0V
- Recommended charge current of 1400mA (C)
- Charging time of 1.5 hrs or a taper current of 70mA (C/20),
- Discharge profile with a maximum current of 280mA (C/5) to 2.5V

4.3 Charging Battery:



Lithium Ion Charging Characteristics



4.3.1 Charging Condition:

- CV of 21.0V max
- CC of 6500mA max.

<u>REVISION</u> 00	<u>ECR/ECN INFORMATION</u> EC No: DATE:	<u>TITLE:</u> 19.3V 1400mAh Li-Ion battery	<u>SHEET No.</u> 1 of 3
<u>DOCUMENT NUMBER:</u> 950012D		<u>CREATED/REVISED BY:</u> AIE	<u>CHECKED BY:</u> MJS <u>APPROVED BY:</u> MJS

4.3.2 To charge lithium-ion battery packs please follow the charging instruction stated below:

Charging instructions

- Charge Voltage: Limit the maximum charge voltage to 4.2V times the number of cells connected in series. This charging voltage is noted on the product specification sheet.
- Charge current: Packs should be charged at C rate for lithium-ion cells. C is the nominal capacity of the pack. (Example: for a 2400 mAh cell, charge at 2.4A).
- Pre-charge: If the cells are deeply depleted (less than 2.9V per cell), packs should be charged at 10% of their capacity (Example: for a 2400 mAh cell, charge at 240 mA) until reaching 3.0V per cell when charging can be continued as stated above.
- Charge temperature: Do not charge lithium ion cells at less than 0°C or more than 45°C.
- Reverse polarity: When connecting the cells to a charger, verify proper polarity.
- Charge method: Lithium ion cells should be charged using a constant current/constant voltage (CC/CV) method. Apply the charge current as stipulated above in step 2 until the pack reaches the voltage measured in step 1. Then, hold the voltage constant until the current tapers down to about 5% of nominal capacity (Example: for a 2400 mAh cell, charge until current is 120 mA).

4.4 Discharge condition:

- Cutoff voltage of 15.0 V
- Maximum discharge current of 10000mA.

4.5 Cycle life: 82% of initial minimum capacity after 300 cycles at 3C, 23°C

4.6 Temperature:

- Charge 0~45°C
- Discharge -20~60°C
- Storage -20~20°C

4.7 Products shipped have 40% state of charge typical

<u>REVISION</u> 00	<u>ECR/ECN INFORMATION</u> EC No: DATE:	<u>TITLE:</u> 19.3V 1400mAh Li-Ion battery	<u>SHEET No.</u> 2 of 3
<u>DOCUMENT NUMBER:</u> 950012D		<u>CREATED/REVISED BY:</u> AIE	<u>CHECKED BY:</u> MJS <u>APPROVED BY:</u> MJS

5. Protection Safety Circuit

- 3.1 Main IC controller is Seiko S-8253AAA and S-8253BAA
- 3.2 Overcharge cutoff voltage: 4.350V +/-25mV
- 3.3 Overdischarge cutoff voltage: 2.40V +/- 80mV
- 3.4 Overcurrent detection will not occur below 9.55A and will occur above 11.94A
- 3.5 Thermistor 10k ,5%
- 3.6 Gold-Plated Contacts

6. Additional component

- Label
- Nomex, Kapton Tape, PVC Heat Shrink, or similar insulators

7. Storage temperature and Humidity range

- 5.1 -20-20°C,45-85%RH (within 1year)
- -20~45°C,45-85%RH (within 3 month)
- -20~60°C,45-85%RH (within 1 month)

8. Storage cautions

- Do not store packs in places of high temperature or under direct sunlight
- For long term storage, store packs in 30% charge state.
- Do not store packs in place which may expose them to rain, water or high humidity.

<u>REVISION</u> 00	<u>ECR/ECN INFORMATION</u> EC No: DATE:	<u>TITLE:</u> 19.3V 1400mAh Li-Ion battery	<u>SHEET No.</u> 3 of 3
<u>DOCUMENT NUMBER:</u> 950012D		<u>CREATED/REVISED BY:</u> AIE	<u>CHECKED BY:</u> MJS
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