Rechargeable Lithium-Ion battery pack specification

Type: CL18650-29E4S1P-ST

Date of issue	Date of change	Change number	Remarks
27.07.2019	-	-	-

1. SCOPE

This specification describes the technical parameters and requirements of the rechargeable Li-Ion battery pack powered by Cellevia Batteries.

2. BATTERY PACK BASIC SPECIFICATION

NO	ITEM	SPECIFICATION	REMARK
1	Type	CL18650-29E4S1P-ST	
2	Nominal Voltage	14.6 V	
3	Rated Capacity	2750 mAh	0.55 A to 12.0 V discharge
4	Rated Energy	40 Wh	
5	Internal Resistance	<150 mΩ	at 1kHz, typical
6	Cell type	INR18650-29E	4 pcs
7	Cell configuration	4S1P	
8	Dimension	Drawning (see point no. 5)	
9	Weight	195 g ± 2 g	
10	Thermistor NTC	---	
11	Leads	Wires, 22AWG UL1007/1569	Length: 100 ± 5 mm with plug
12	Plug	Molex 43025-0200	

3. BATTERY PACK STANDARD TESTING CONDITIONS

NO	ITEM	SPECIFICATION		REMARK
1	Charging Voltage	16.8 V ± 0.1 V		
2	Discharge Cut-off Voltage	12.0 V ± 0.1 V		
3	Charging Current	Standard	1375 mA to 16.8 V, end current 55 mA	CC/CV method
		Fast	2000 mA to 16.8 V, end current 55 mA	not for cyclelife
4	Charging Time	Standard charge	3 hours	or 0.02C end curr.
		Fast charge	2.75 hours	or 0.02C end curr.
5	Discharging Current	Continous	2000 mA	Limited by BSU
		Non continous	3000 mA	Limited by BSU see point no. 4.2
6	Temperature Range (pack surface temp.)	Charge	0 ~ +45°C	
		Discharge	-20 ~ +60°C	
		Storage	-10 ~ +25°C	1 year

4. BATTERY SAFETY UNIT SPECIFICATION

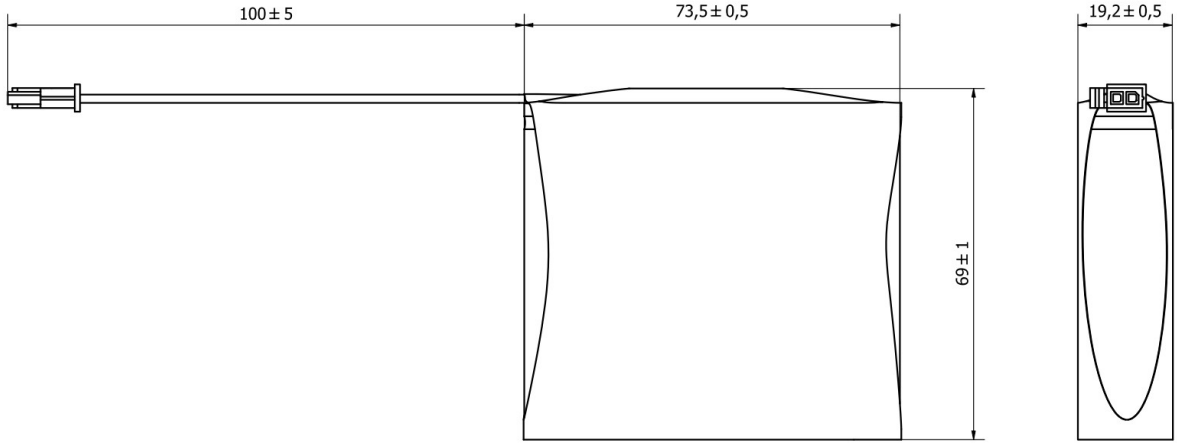
4.1. BASIC PARAMETERS

NO	ITEM		MIN	TYPICAL	MAX	UNIT	REMARKS
1	Over charge detection voltage	Cut off	4.225	4.25	4.275	V/cell	0.5 – 1.5 s
		Release	4.0	4.05	4.1	V/cell	
2	Over discharge detection voltage	Cut off	2.9	3.0	3.1	V/cell	50 - 150ms
		Release	3.1	3.2	3.3	V/cell	
3	Discharge Over current detection current	Cut-off	4.0	5.0	6.0	A	5 – 20 ms
		Release	---			-	Cut load, Auto recovery or charging activation
4	Short-circuit protection	Delay time	200	300	500	us	
		Release	---			-	Cut load or charging activation
5	Temperature range	Operating	-40		80	°C	
		Storage	-55		125	°C	
6	Resistance		20	40	60	mΩ	
7	Consumption current				50	uA	

4.2. ADDITIONAL PARAMETERS

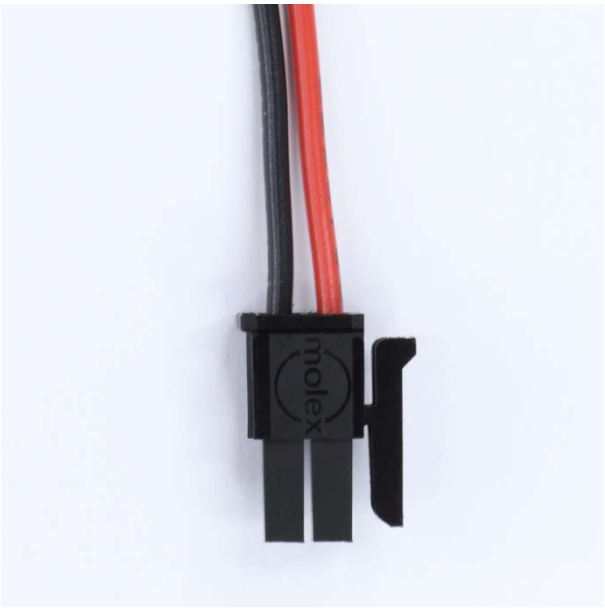
NO	ITEM	PARAMETER	REMARK
1	Max continuous current	2 A	Charge/discharge
2	Current limit	3 A	t < 5 s

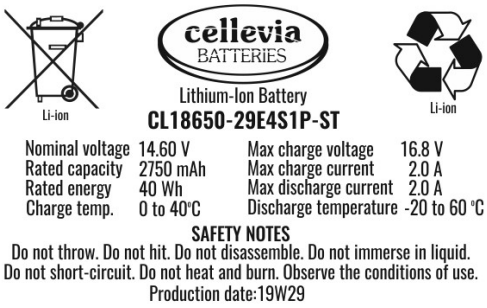
5. OUTLINE DRAWNING


100 ± 5
73,5 ± 0,5
19,2 ± 0,5
69 ± 1

6. PICTURE


cellevia
BATTERIES
Lithium-Ion Battery
CL18650-29E4S1P-ST
Nominal voltage 14.60 V
Rated capacity 2750 mAh
Rated energy 40 Wh
Charge temp. 0 to 40°C
Max charge voltage 16.8 V
Max charge current 2.0 A
Max discharge current 2.0 A
Discharge temperature -20 to 60 °C
SAFETY NOTES
Do not throw. Do not hit. Do not disassemble. Do not immerse in liquid.
Do not short-circuit. Do not heat and burn. Observe the conditions of use.
Production date:19W29


molex



7. CAUTION IN USE

To ensure proper use of the battery please read the manual carefully before using it.

7.1. HAZARD WARNINGS

- Do not expose to, dispose of the battery in fire,
- Do not put the battery in a charger or equipment with wrong terminals connected,
- Avoid shorting the battery,
- Avoid excessive physical shock or vibration,
- Do not disassemble or deform the battery,
- Do not immerse in water.
- Do not use the battery mixed with other different make, type or model batteries
- Keep out of the reach of children

7.2. CHARGE AND DISCHARGE

- Battery must be charged in appropriate charger only,
- Never use a modified or damaged charger,
- Do not leave battery in charger over 24 hours

7.3. STORAGE

- Store the battery in a cool, dry and well-ventilated area,
- Store the battery in a 30% - 50% SOC,
- The batteries shall be charged every 6 months during storage

7.4. DISPOSAL

Regulations vary for different countries. Dispose of in accordance with local Regulation.