



# Rechargeable Lithium-Ion battery pack specification

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Type: CL18650-29E1S4P-ST

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

The information contained in this specification is subject to change without notice.

### 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	CL18650-29E1S4P-ST	
2	Nominal Voltage	3.65 V	
3	Rated Capacity	11000 mAh	2.2 A to 2.5 V discharge
4	Rated Energy	40 Wh	
5	Internal Resistance	< 60 mΩ	at 1kHz, typical
6	Cell type	INR18650-29E	4 pcs
7	Cell configuration	1S4P	
8	Dimension	Drawing (see point no. 5)	
9	Weight	190 g ± 2 g	
10	Thermistor NTC	---	
11	Leads	Wires, 20AWG UL1007/1569	Length: 100 ± 5 mm with plug
12	Plug	Cvilux CP-01102010	

### 3. BATTERY PACK STANDARD TESTING CONDITIONS

NO	ITEM	SPECIFICATION	REMARK
1	Charging Voltage	4.2 V ± 0.1 V	
2	Discharge Cut-off Voltage	2.5 V ± 0.1 V	
3	Charging Current	Standard	5500 mA to 4.2 V, end current 220 mA
		Fast	10000 mA to 4.2 V, end current 220 mA
4	Charging Time	Standard charge	3 hours
		Fast charge	2.6 hours
5	Discharging Current	Continous	10 A
		Non continous	12 A
6	Temperature Range (pack surface temp.)	Charge	0 ~ +45°C
		Discharge	-20 ~ +60°C

		Storage	-10 ~ +25°C	1 year
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#### 4. BATTERY SAFETY UNIT SPECIFICATION

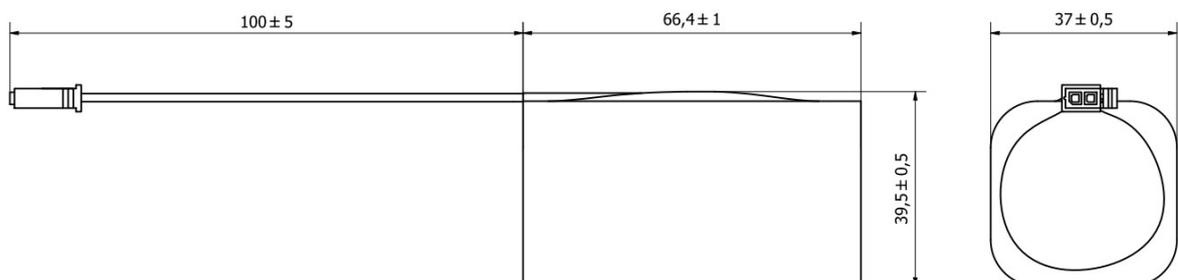
##### 4.1. BASIC PARAMETERS

NO	ITEM		MIN	TYPICAL	MAX	UNIT	REMARKS
1	Over charge detection voltage	Cut off	4.225	4.25	4.275	V/cell	0.5 – 2.0 s
		Release	4.0	4.05	4.1	V/cell	
2	Over discharge detection voltage	Cut off	2.40	2.5	2.6	V/cell	10 - 200ms
		Release	2.9	3.0	3.1	V/cell	
3	Discharge Over current detection current	Cut-off	14	15	17	A	10 – 20 ms
		Release	---			-	Cut load, Auto recovery
4	Short-circuit protection	Delay time	150	300	500	us	
		Release	---			-	Cut load
5	Temperature range	Operating	-20		85	°C	
		Storage	-40		125	°C	
6	Resistance		20	40	50	mΩ	
7	Consumption current				10	uA	

##### 4.2. ADDITIONAL PARAMETERS

NO	ITEM	PARAMETER	REMARK
1	Max continuous current	10 A	Charge/discharge
2	Current limit	12 A	t < 15s

#### 5. OUTLINE DRAWING



6. PICTURE



Lithium-Ion Battery  
**CL18650-29E1S4P-ST**

Nominal voltage	3.65 V	Max charge voltage	4.20 V
Rated capacity	11000 mAh	Max charge current	10.0 A
Rated energy	40 Wh	Max discharge current	10.0 A
Charge temp.	0 to 40°C	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



## 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.