

ULTRALiFE[®]

2EXL7573

7.2V 3.0Ah Li-ion Battery Assembly

File ID	Author	Approval	Circulation	Release Date	Pack ID	Page	Rev
SP-2EXL7573-Rev-AA	J. Lapeña	M. MacWillie	Sales	2022-03-28	2EXL7573	1/6	AA

Part Number: 2EXL7573

Key Features:

- Samsung INR18650-30Q cells
- Integrated protection circuit ensures operation with safe limits 2S1P configuration
- With 10k NTC thermistor lead
- Molex Nano-Fit 1053071203 connector
- Designed to meet IEC 62133 and UL 2054

Regulatory Approvals:

- UN 38.3

Electrical Characteristics:

Nominal Voltage	7.2V
Capacity (Typical @ 25C)	3000mAh
Capacity (Minimum @ 600mA, 5V cut-off, 25C)	2950mAh
Energy (Typical, @ 25C)	21.6Wh
Voltage Range	5V – 8.4V
Continuous Charge Current (Standard @ 25C)	1.5A
Continuous Charge Current (Max @ 25C)	3A
Continuous Discharge Current (Max @ 25C)	3A
Charge Termination Current (1.5A charge @ 25C)	150mA
Charge Termination Current (4A charge @ 25C)	100mA
Thermistor Manufacturer Part Number	NCP15XH103F03RC
Thermistor Nominal Resistance (@ 25C)	10K
Thermistor BConstant(25/85C)	3434K

Mechanical Characteristics:

Dimensions	Length (Typical)	66.250mm
	Width (Typical)	37.378mm
	Thickness (Typical)	19.746mm

Environmental Characteristics:

Charge Temperature (Ambient)	0C to +45C
Discharge Temperature (Ambient *Note 1)	-20C to 60C
Storage Temperature (Ambient, @30% SOC*Note2)	0C to 23C (1 year)
	0C to 45C (3 months)
	0C to 60C (1 months)

Note 1: Maximum cell surface temperature = 70C. Maximum surface temperature is defined as the point in the pack where the cell surface temperature is the highest.

Note 2: Capacity recovery > 80% for all specified storage conditions if stored at 30% state of charge.

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Serialization:

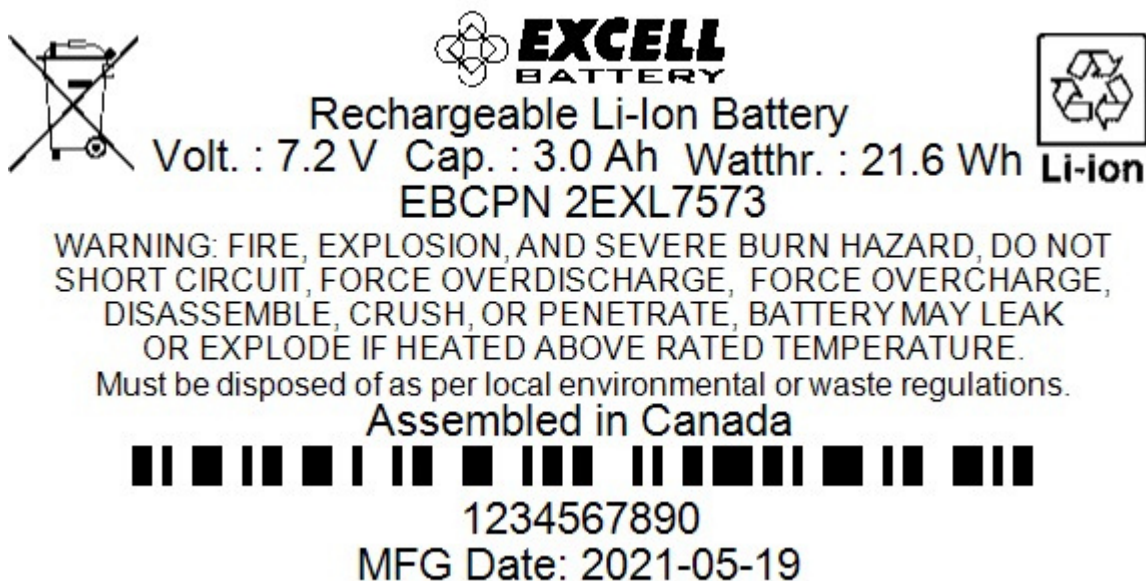
Packs will be serialized per Excell's standard serialization format BYZZZNNNN where:

- B = Excell Battery branch
 - 1 = Surrey
 - 2 = Mississauga
 - 3 = Calgary
 - 4 = Houston
- YY = The last two digits of the current year
- ZZZ = The day of the year the serial batch was created
- NNNN = Incremental number within the serial batch

For example, the first battery in a batch produced in Mississauga on February 11, 2021 would be: **1210420001**.

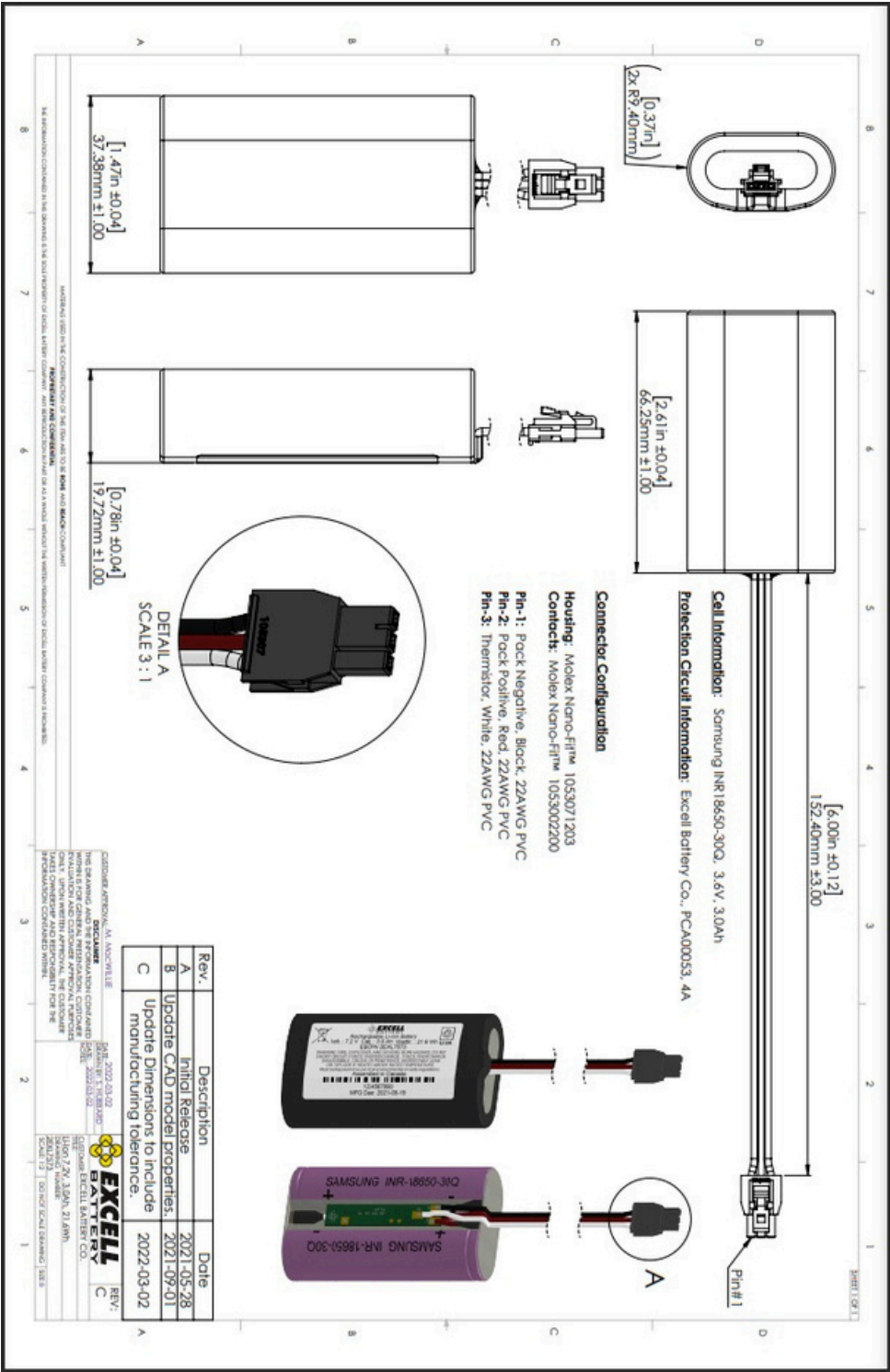
Labelling:

Packs will have the following labels affixed to the surface of the battery:



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Pack Drawing:



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Protection Circuit Thresholds:

Parameter	Min.	Typ.	Max.	Unit
Maximum Recommended Constant Operating Current		4.000		A
Overdischarge Detection Voltage	2.350	2.400	2.450	V
Overdischarge Release Voltage	2.800	2.900	3.000	V
Overdischarge Detection Delay	102.400	128.000	153.600	ms
Overdischarge Release Delay		n/a		ms
Overcharge Detection Voltage	4.205	4.225	4.245	V
Overcharge Release Voltage	4.045	4.075	4.105	V
Overcharge Detection Delay	0.800	1.000	1.200	S
Overcharge Release Delay Time		n/a		ms
Discharge Overcurrent Threshold	4.000	4.750	5.560	A
Discharge Overcurrent Delay	6.400	8.000	9.600	ms
Discharge Overcurrent Release Delay		n/a		S
Charge Overcurrent Threshold	4.000	4.750	5.560	A
Charge Overcurrent Delay	6.400	8.000	9.600	ms
Charge Overcurrent Release Delay		n/a		S
Short Circuit Detection Threshold	18.000	23.500	28.600	A
Short Circuit Detection Delay	224.000	280.000	336.000	us
Redundant Safety Fuse		6.000		A
Operating Ambient Temperature	-40.000		85.000	°C
Storage Temperature	-40.000		125.000	°C

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Cell Specification:

2. Description and model

2.1 Description	lithium-ion rechargeable cell
2.2 Model name	INR18650-30Q
2.3 Site	Manufactured in Korea, Malaysia & China

3. Nominal specifications (*1)

Item	Specification
3.1 Standard discharge capacity	Min. 2,950mAh - Charge: 0.5C(1.5A), 4.20V, 0.02C(150mA) cut-off @ RT - Discharge: 0.2C(600mA), 2.5V cut-off @ RT * 1C = 3,000mA
3.2 Rated discharge capacity	Min. 2,900mAh - Charge: 4A, 4.20V, CCCV 100mA cut-off @ RT - Discharge: 10A , 2.5V cut-off @ RT
3.3 Nominal voltage	3.6V
3.4 Standard charge	CCCV, 1.5A, 4.20V, 150mA cut-off
3.5 Rated charge	CCCV, 4A, 4.20V, 100mA cut-off
3.6 Charging time	Standard charge : 132min / 150mA cut-off (@ RT) Rated charge: 60min / 100mA cut-off (@ RT)
3.7 Max. continuous discharge	15A (@ RT)
3.8 Discharge cut-off voltage	2.5V (End of discharge)
3.9 Cycle life	Capacity $\geq$ 1,770mAh @ after 250cycles (60% of the standard capacity @ RT) - Charge : 1.5A, 4.20V, CCCV 150mA cut-off @ RT - Discharge: 15A , 2.5V cut-off @ RT
3.10 Storage characteristics	Capacity recovery(after the storage) $\geq$ 2,320mAh (80% of the rated capacity @ RT) - Charge : 4A, 4.20V, CCCV 100mA cut-off @ RT - Storage : 30 days (@ 60℃) - Discharge : 10A , 2.5V cut-off @ RT
3.11 Cell weight	48.0g max
3.12 Cell dimension	Height : Max. 65.00 mm Diameter : Max. 18.40 mm
3.13 Operating temperature(*2)	Charge : 0 to 45℃ (Ambient) Discharge: -20 to 60℃ (Ambient)
3.14 Storage temperature(*3)	1 year 0~23℃ 3 months 0~45℃ 1 month 0~60℃

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Revisions:

Revision	Date	Description of Change	DQP / ECO #	Approval
AA	2022-03-28	Initial Release	DQP-M21-45	M. MacWillie