



SVOLT

Light Vehicle Battery
Product Catalogue

蜂巢能源
轻型动力电池产品手册

CORPORATE HISTORY

SVOLT developed from the Battery Unit of Great Wall Motors which is a leader in the Chinese automotive industry. SVOLT has carried out pre-research on battery since 2012. In 2018, SVOLT completely separated from GWM and began to develop independently, and officially changed its name to SVOLT Energy Technology Co., Ltd. SVOLT is headquartered in Jintan District, Changzhou, Jiangsu province in China. As a global high-tech company, SVOLT's comprehensive one-stop product portfolio includes battery materials, cells, modules, packs and battery management systems as well as energy storage products.

Started with Battery Pack Project Team

2012

Grew into Battery Business Unit

2016

Invest in Pilbara Minerals in Australia

2017

SVOLT Energy Technology Company Limited was Established

2018

03/14
Signing Ceremony of SVOLT R&D HQ in Wuxi

04/16
SVOLT'S debut at Shanghai Auto Show-open the "Stacking Era" of High-end Automotive Battery

07/09
World's Premier of NCMA and Cobalt-free Cells

09/30
SVOLT Test Center passed CNAS' Evaluations

11/27
Grand Opening of Automotive Grade Intelligent Battery Factory in Jintan

2019

04/29
SDIC Invested 1 Billion RMB in SVOLT

05/18
Online Launch Event for Cobalt-free Cells

05/22
SVOLT Stacking Cells received UL and CB Certifications

07/06
Wuxi SVOLT Global Lithium-ion Battery Innovation Center Phase 1 was operational

09/09
SVOLT Cobalt-free Cells began Prototype Road Test

11/14
SVOLT Test Center passed CNAS' Recognition

11/17
SVOLT Europe's Announcement of two Battery Production Facilities in Germany

12/02
SVOLT Battery Day

2020

01/27
Signing Ceremony of 20GWh Factory in Suining Sichuan Province

02/04
The First Mass Production of the Cobalt-free Cathode Material of SVOLT

02/19
Signing Ceremony of 20GWh Factory in Huzhou

02/25
Signing Ceremony of A Round Financing

02/26
Construction of Phase 3 of Changzhou Factory Started

03/29
Construction of Suining Factory Started

05/15
Meeting of B Round Financing

2021

ORGANIZATIONAL STRUCTURE



- SVOLT Energy Technology Co., Ltd.
Beijing Division
- SVOLT Energy Technology Co., Ltd.
Baoding Division
- SVOLT Energy Technology Co., Ltd.
Changzhou Division
- SVOLT Energy Technology Co., Ltd.
Wuxi Division
- SVOLT Energy Technology Co., Ltd.
Shanghai Division
- SVOLT Energy Technology Co., Ltd.
Ma' anshan Division
- SVOLT Energy Technology Co., Ltd.
Huzhou Division
- SVOLT Energy Technology Co., Ltd.
Taizhou Division
- SVOLT Energy Technology Co., Ltd.
Suining Division
- SVOLT Energy Technology Co., Ltd.
Nanjing Division
- **Other Overseas Branches**

Germany

Frankfurt
Overseas HQ & Systems
Engineering

Saarland Plant

Module & Pack Plant----- **2022**

Cell Plant -----**2023**

China

Western China

Suining
Capacity Planning

**Baoding, Beijing-
Tianjin-Hebei**
Pilot Production , R&D

**The middle reach of
the Yangtze River**
Capacity Planning

Yangtze River Delta

Jintan, Changzhou

Phase I & II
Phase III
Phase IV
Huzhou
Ma' anshan
Nanjing lishui

Regional Capacity
Planning

Wuxi, China
Pilot Production, R&D Center

Shanghai, China
Pilot Production, R&D Center

Shenzhen, China
Innovative Technology

Korea
R&D, Application Engineering

Japan
Solid-State Battery and
Advanced Technology

India
BMS Software Development



-  R&D
-  Corporate HQ and Regional HQ
-  Manufacturing Site

GLOBAL PRESENCE AND PLANNING



Automotive Standards and
Intelligent AI Manufacturing
**Battery Factory in
Changzhou**

From **Capacity** **Area** **Investment** **May. 2019**
18GWh
533.3K m²
800Million

Phase I Capacity **4GWh** SOP **02/2020**
Phase II Capacity **8GWh** SOP **01/2021**
Phase III Capacity **6GWh** SOP **01/2023**



Baoding R&D Center

From **Area** **Investment** **Laboratories** **FullyOperational** **Nov.2016**
7.04Hectares
700 Million
8



SVOLT Global Lithium-ion
**Battery Innovation Center
in Wuxi**

From **Floor Area** **Area** **Investment** **Aug. 2019**
100000 m²
141K m²
100Million CNY

8 Innovation Laboratories
1 Highly Precise and Automated Pilot Production Base
1 Comprehensive Testing & Analysis Center



Cylindrical Battery Factory
IN MA'ANSHAN

From
Aug. 2021

Total Investment
11Billion CNY

Phase I
Planned Capacity
4GWh

Phase II
Planned Capacity
24GWh

Lishui Manufacturing
BASE IN NANJING

Total Capacity
Planning
14.6Gwh

Total Investment
5.6Billion CNY

Phase I
Planned Capacity
6.6GWh

Phase II
Planned Capacity
8GWh





Product Application

Product Parameter

Flexible Cell Size

7.8*133*202~20Ah
6.7*155*240~25Ah
9.3*133*202~25Ah
8.4*155*240~30Ah
11*133*202~30Ah

Chemistry

LiFePO4

Long Cycle Life

High Safety

Enhanced Explosion
Proof Performance

Electrochemical Stabilities

-20°C ~ 55°C

High Power Discharge

2C Discharge » 95%
Nominal Capacity

Multiple Capacity

20Ah 25Ah
27Ah 30Ah
33Ah 50Ah

Applications

- electric bicycle
- Electric Logistics Vehicle
- Hi speed electronic motors logistics 3 wheelers



LiFePO4 Pouch CELL

Same Side Tab **20AH**
Same Side Tab **30AH**
PHEV **27.7AH**

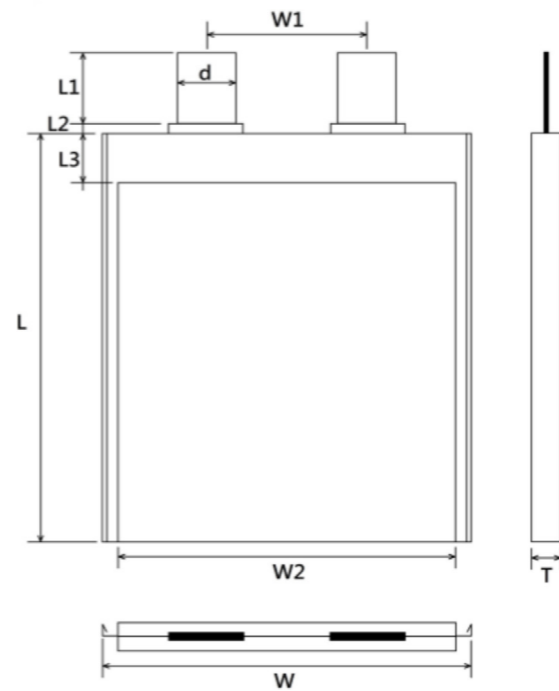
Same Side Tab **25AH**
Same Side Tab **33AH**
Two Side Tab **50AH**

Pouch CELL PACK

48V20Ah
48V25Ah

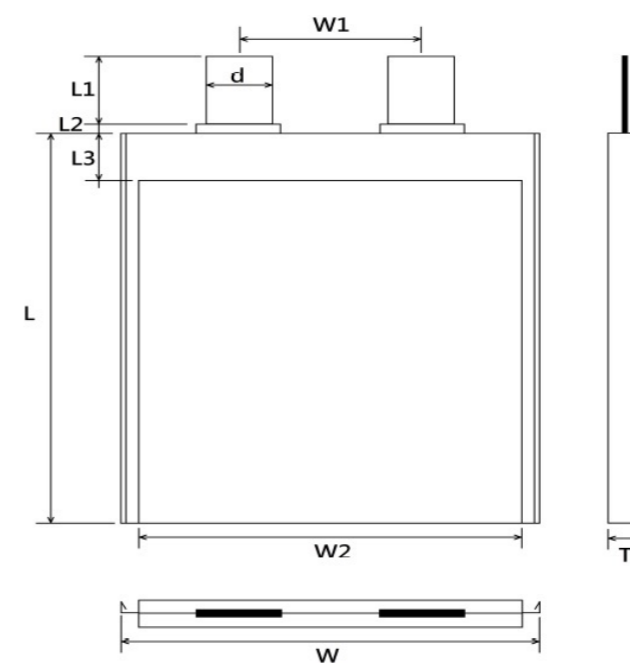
48V30Ah
60V25Ah

Same Side Tab 20AH



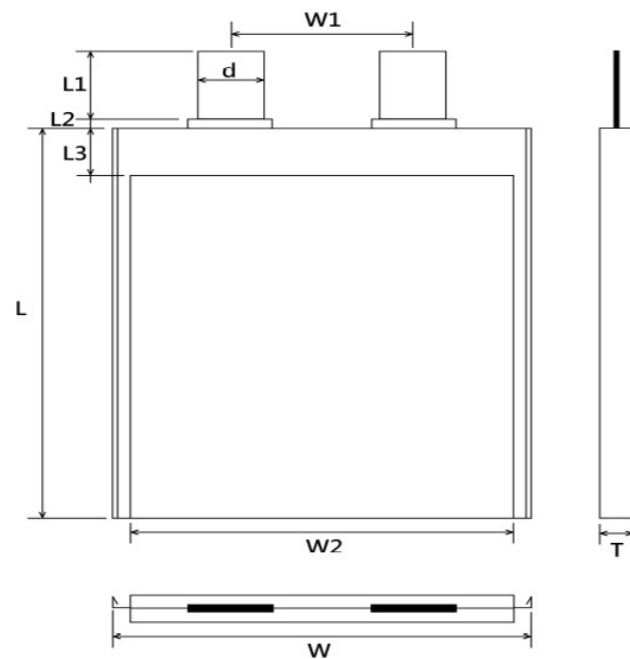
ITEM	SPEC	REMARK
Cell type	LFP	
Cell No.	78D4202	
Nominal Voltage	3.2V	
Capacity	20Ah	25°C (0.5C CHG 1C DCGH)
I.R.	≤ 2.0m	1KHz/ 25°C
Weight	≤ 450g	
Charge Cutoff Voltage	3.65V	CC-CV (0.02C Cutoff)
Discharge Cutoff Voltage	2.5V	2.0V (≤ 0°C)
Standard Charge Current	10.0A	
Max Charge Current	20.0A	
Max Peak Charge Current	40.0A,10S	
Standard Discharge Current	20.0A	
Max Continuous Discharge Current	40.0A	≥ 95% Nominal Capacity
Max Peak Discharge Current	80.0A,10s	
Operating Temp.	Charge 0°C ~ 45°C Discharge -20°C ~ 55°C	
R.T Cycle Life	≥ 2500	100% DOD,0.5C CHG 1C DCHG
High Temp SOC Keeping Capacity	55°C , 7 days, ≥ 90%	
High Temp SOC Retention Capacity	55°C , 7 days, ≥ 95%	
Low Temp Discharge	-20°C 1C DCHG to 2V, ≥ 80% Nominal Capacity	
Storage	-10°C ~ 35°C	SOC>30%

Same Side Tab 25AH



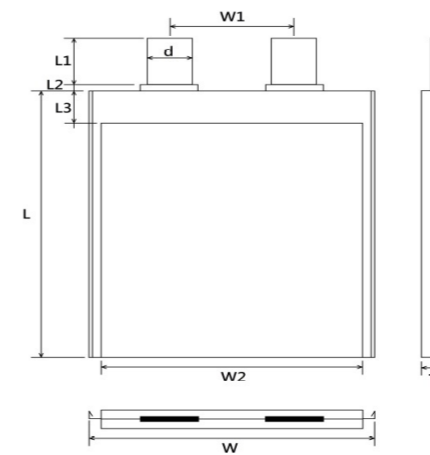
ITEM	SPEC
Model	69F6240/93D4202
Shell	Aluminum Plastic Film
Capacity (2.5V-3.65V)	25.0Ah @ 0.5C A
Rated voltage(Work Voltage)	3.2 V
Max. Charge voltage	3.65 V
Max. Charge current	25.0 A (1.0 CA)
Cut-off voltage	2.5 V
Standard discharge current	12.5 A (0.5 CA)
Max continuous discharge current	75.0 A (3.0 CA)
Weight (including shell)	492±25g
Internal Impedance(Max, at 1000Hz)	≤ 1.5 mΩ
Standard Charge method	0.5C CC charge to 3.65V, 3.65V CV charge to 0.05C cut-off
Operate temperature	charge 0°C ~50°C discharge -10°C ~60°C storage -10°C ~50°C (≤ 1 month)
Dimension	6.7*155*239mm

Same Side Tab 30AH



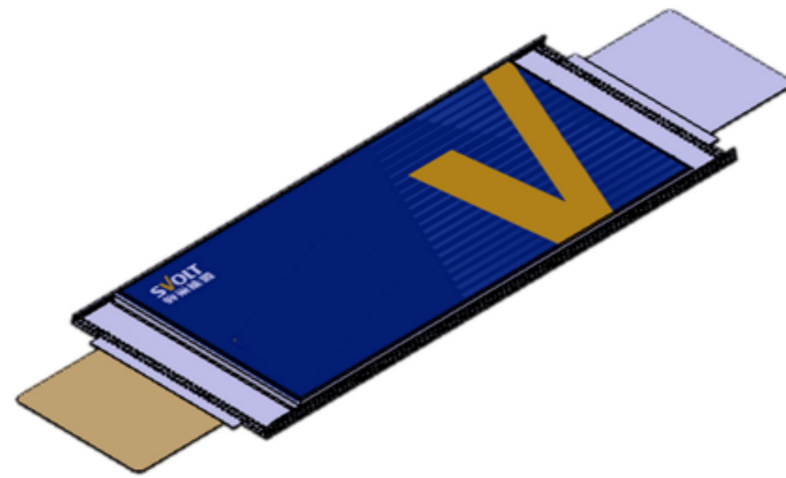
ITEM	SPEC	REMARK
Cell type	LFP	
Cell No.	11D4202/86F6240	
Nominal Voltage	3.2V	
Capacity	30Ah	25°C (0.5C CHG 1C DCHG)
I.R.	≤ 1.5mΩ	1KHz/ 25°C
Weight	≤ 605g±25	
Charge Cutoff Voltage	3.65V	CC-CV (0.02C Cutoff)
Discharge Cutoff Voltage	2.5V	CC-CV (0.02C Cutoff)
Standard Charge Current	10.0A	
Max Charge Current	30.0A	
Standard Discharge Current	30.0A	
Max Continuous Discharge Current	60.0A	
Max Peak Discharge Current	90.0A, 10s	
Operating Temp.	Charge 0°C ~ 50°C Discharge -20°C ~ 60°C	
R.T Cycle Life	≥ 2000	25°C, 100% DOD, 1C
High Temp SOC Keeping Capacity	55°C, 7 days, ≥ 90%	
High Temp SOC Retention Capacity	55°C, 7 days, ≥ 95%	
Low Temp Discharge	-20°C 1C CHG to 2V ≥ 80% Nominal Capacity	
Storage	-10°C ~ 50°C	(≤ 1 month)

Same Side Tab 33AH



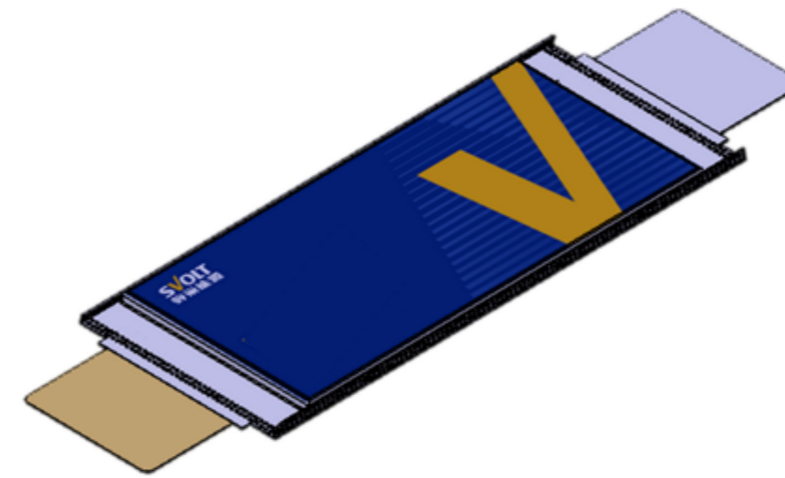
ITEM	SPEC
Cell Type	LiFePO4 Pouch Cell
Cell No.	DOE8156-01
Cell Capacity ☆	33.2Ah (Typical, 25°C, 0.5C Discharge Capacity, Ct) 32.3Ah (Minimum, 25°C, 0.5C Discharge Capacity, Cm)
Nominal Voltage ☆	3.2V
Cell I.R ☆	≤ 1.5mΩ
Cell Weight	≤ 630g
Max Charge Current	Continuous Charge 0.75C, 25°C Pulse Charge 10S, 50%SOC, 1.5C, 25°C
Charge Voltage	3.65±0.05V
Max Discharge Current	Continuous Charge 1.0 C, 25°C Pulse Discharge 10S, 50%SOC, 2.0C, 25°C
0.5C Discharge Cutoff Voltage	+28°C +55°C 2.5V -10°C +27°C 2.0V -20°C -11°C 1.5V
Max Operating Temp Scope:	
Charge	10°C ≤ T ≤ 0°C, 0.1C Max, 3.6V Max 0°C ≤ T ≤ 5°C, 0.3C Max, 3.6V Max 5°C ≤ T ≤ 15°C, 0.5C Max, 3.6V Max 15°C ≤ T ≤ 45°C, 1.0C Max, 3.6V Max 45°C ≤ T ≤ 50°C, 1.0C Max, 3.6V Max
Discharge	-20°C ~ 55°C, 2.0C Max
Best Operating Temp.Scope:	
Charge	15°C ~ 35°C
Discharge	10°C ~ 40°C
Storage Temp.:	
Within 1 Month	-40°C ~ 55 °C
Within 6 Months	-20°C ~ 35 °C
Cycle Life	25°C, 0.75C/0.75C, ≥ 93% DOD, charge/discharge 6000 times, ≥ 75% start capacity

PHEV
27.7AH



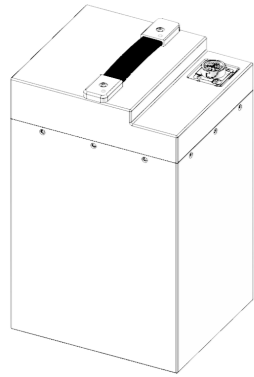
Items	Unit	HEV	Condition
Cathode		LFP	
Anode		Gr.	
Size	mm	10.2*93*305	
Weight	g	≤565	
Nominal capacity	Ah	≥27.7	RT 1C
Nominal Voltage	V	≥3.20	RT 1C
Energy density	Wh/L	≥300	RT 1C
Energy density	Wh/kg	≥155	RT 1C
Usage voltage	V	2.5-3.65	

Two Side Tab
50AH



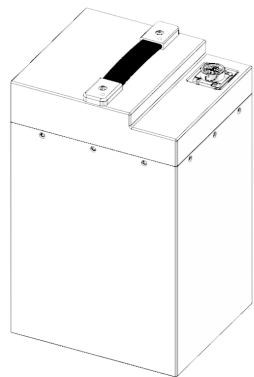
ITEM	SPEC	REMARK
Nominal Capacity	50Ah	1C@25°C ±2°C
Nominal Voltage	3.2V	
Max Charge Voltage	3.65V	
Min Discharge Cutoff Voltage	2.0V	
Standard Charge Method	1C(50A) CC, 3.65 V CV, 0.05C(2.5A) cutoff	R.T. 25°C ±2°C
Standard Discharge Method	1C(50A) CC, 2.0V cutoff	R.T. 25°C ±2°C
Standard Charge Current	1C(50A)	
Standard Discharge Current	1C(50A)	
Max Continuous Charge Current	1.5C(75A)	
Max Continuous Discharge Current	2C(100A)	
Weight	945±30g	
Storage Temp.	≤ 1 year: -20~25°C ≤ 3 month: -20~45°C	25%-50%SOC Storage 25%-50%SOC Storage
Operating Temp.	Charge: 0 ~ 55°C Discharge: -20 ~ 60°C	
I.R.	≤1.0mΩ(AC) ≤3.0mΩ(DC 3C Discharge 10s)	1KHz 25°C, 30%SOC

48V20(30Ah)



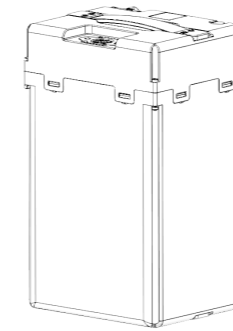
ITEM	SPEC
Configuration	16S1P
Nominal Voltage	51.2V
Nominal Capacity	20Ah
Energy	1024Wh
Standard Charge Current	10A
Max Charge Current	20A
Standard Discharge Current	20A
Max Discharge Current	40A
Max Discharge Pulse Current	60A, 10S
Cycle Life	≥ 2000
Dimension	156*180*288
Connector	2+1+5

48V25Ah



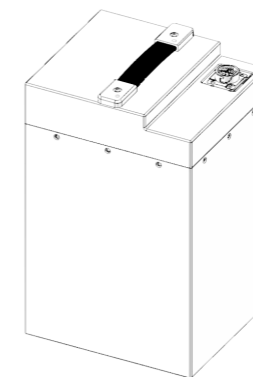
Technical Specification	
Nominal Voltage (V)	51.2V
Nominal Capacity (AH)	25
Total Energy (KWh)	1.28
Module Configuration	16S1P
Module Discharge Voltage (V)	40-58.4
Rated Discharge Current (A)	12.5
Rated Charge Current (A)	12.5
Operate Temp. (°C)	Charge 0~45°C, Discharge -20~55°C
Recommend Operate SOC	25-85%
Long Time Shelf SOC	40%~70%
Short Term (1Month) Storage Temp. (°C)	-20°C ~60°C
Long Time (1Year) Storage Temp. (°C)	0°C ~25°C
Storage Humidity	<75%
Cycle Life(time) (80%DOD, Urban Condition)	25°C ,0.5C Charge/0.5C Discharge ≥2000 times

48V30Ah



ITEM	SPEC
Configuration	16S1P
Nominal Voltage	51.2V
Nominal Capacity	30Ah
Energy	1536Wh
Standard Charge Current	15A
Max Charge Current	30A
Standard Discharge Current	30A
Max Discharge Current	60A
Max Discharge Pulse Current	90A, 10S
Cycle Life	≥ 1600
Dimension	156*180*300
Connector	Charge: 2+3+18; Discharge: Z624-A

60V25Ah



Technical Specification	
Nominal Voltage (V)	60.8V
Nominal Capacity (AH)	25
Total Energy (KWh)	1.52
Module Configuration	19S1P
Module Discharge Voltage (V)	47.5-69.35
Rated Discharge Current (A)	12.5
Rated Charge Current (A)	12.5
Operate Temp. (°C)	Charge 0~45°C, Discharge -20~55°C
Recommend Operate SOC	25-85%
Long Time Shelf SOC	40%~70%
Short Term (1Month) Storage Temp. (°C)	-20°C ~60°C
Long Time (1Year) Storage Temp. (°C)	0°C ~25°C
Storage Humidity	<75%
Cycle Life(time) (80%DOD, Urban Condition)	25°C ,0.5C Charge /0.5C Discharge ≥2000 times

1 Size

LXR 21700

2 Models

4.2Ah
5.0Ah

3 Chemistries

NCM+Gr
High Ni+Gr
High Ni+SiC/SiO



Applications

Electric bicycle
Electric Logistics Vehicle
Commercial Vehicle
Electric tools

Long Cycle Life

High Safety

Electrochemical
Stabilities

High Capacity
Discharge

Enhanced Explosion
Proof Performance

-20°C ~ 45°C

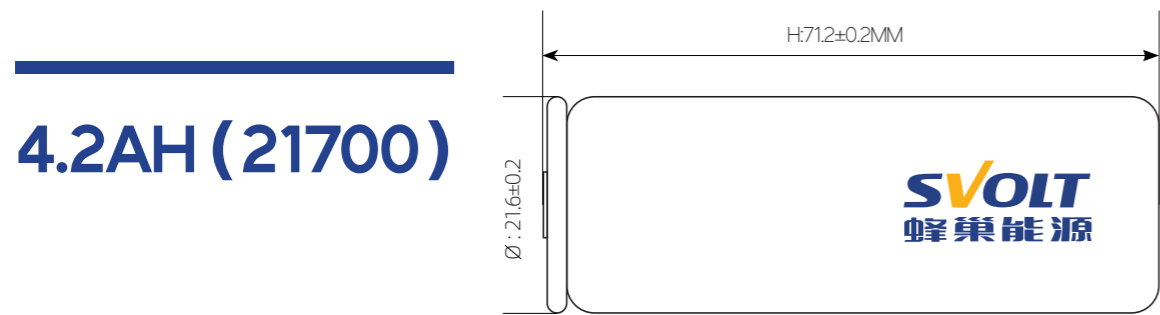
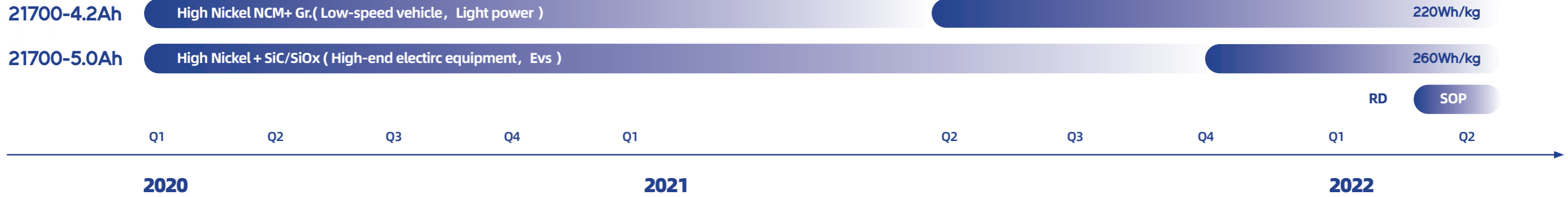
1.2C, Charging 40min,
80%SOC

Product Application Product Parameter

Cylindrical
21700 CELL

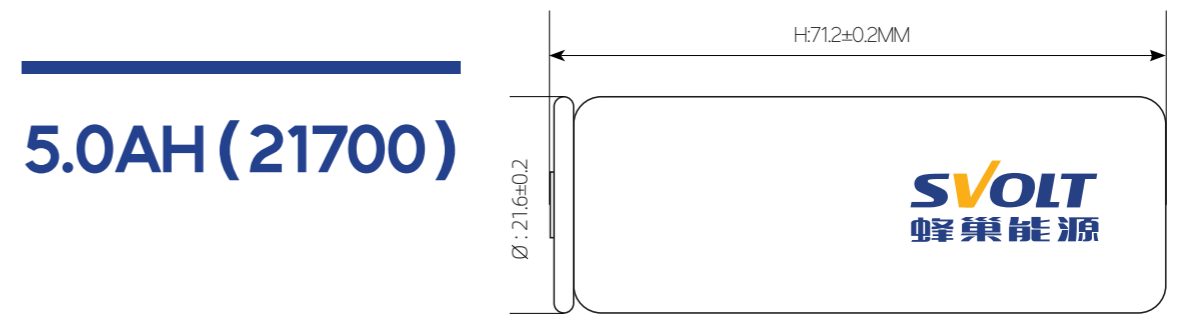
SVOLT CELL PRODUCT-4.2AH (21700)
SVOLT CELL PRODUCT-5.0AH (21700)

Cylindrical CELL Roadmap



4.2AH (21700)

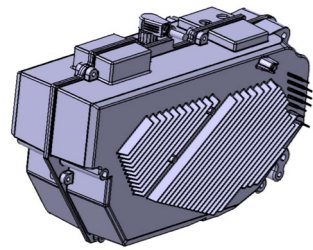
ITEM	SPEC
Capacity (mAh)	Nominal Capacity: 4200 mAh@0.2C
	Minimum Capacity: 4200 mAh@0.2C
Nominal Voltage (V dc)	3.6V
Charge Voltage (V dc)	4.20V
Discharge cut-off Voltage (V dc)	2.75 V
Max Charge Current (mA)	0°C ≤ T ≤ 5°C 0.2C (840mA) (not for cycle life) 5°C < T ≤ 15°C 0.5C (2100mA) (not for cycle life) 15°C < T ≤ 45°C 1C (4200mA) (not for cycle life)
Max Discharge Current (mA)	-20°C ≤ T ≤ 5°C 1.0C (4200mA) (not for cycle life) 5°C < T ≤ 45°C 3.0C (12600mA) (not for cycle life) 45°C < T ≤ 60°C 1.5C (6300mA) (not for cycle life)
Storage Temperature	1 year: -20~25°C 3 months: -20~45°C 1 month: -20~60°C
Humidity Range (RH)	0~60% RH (non-condensing)
Internal Resitance	≤ 20 mΩ (AC Impedance, 1000 Hz)
Cell Dimension (mm)	Height: 71.2±0.2mm Diameter: 21.6±0.2mm
Weight (g)	69±2g



5.0AH (21700)

ITEM	SPEC
Capacity (mAh)	Nominal Capacity: 5000 mAh@0.2C
	Minimum Capacity: 4850 mAh@0.2C
Nominal Voltage (V dc)	3.6V
Charge Voltage (V dc)	4.20V
Discharge cut-off Voltage (V dc)	2.75 V
Max Charge Current (mA)	0°C ≤ T ≤ 5°C 0.2C (1000mA) (not for cycle life) 5°C < T ≤ 15°C 0.5C (2500mA) (not for cycle life) 15°C < T ≤ 45°C 1C (5000mA) (not for cycle life)
Max Discharge Current (mA)	-20°C ≤ T ≤ 5°C 1.0C (5000mA) (not for cycle life) 5°C < T ≤ 45°C 1.5C (7500mA) (not for cycle life) 45°C < T ≤ 60°C 1.5C (7500mA) (not for cycle life)
Storage Temperature	1 year: -20~25°C 3 months: -20~45°C 1 month: -20~60°C
Humidity Range (RH)	0~60% RH (non-condensing)
Internal Resitance	≤ 20 mΩ (AC Impedance, 1000 Hz)
Cell Dimension (mm)	Height: 71.2±0.2mm Diameter: 21.6±0.2mm
Weight (g)	69±2g

96V51Ah NCM (Software Pack)



ITEM	SPEC
Module Configuration	1P26S
Nominal Voltage	94.12V
Nominal Capacity	51Ah
Rate Energy	4800.12Wh
Standard Charge Current	51A
Max Charge Current	102A
Standard Discharge Current	51A
Max Discharge Current	153A
Max Discharge Peak Current	416A,10S
Cycle Life	≥1600
Size	496*223*320.5
Weight	36Kg

Svolt cell product 51Ah (PHEV)



ITEM	CONDITION	UNIT	TARGET
CCathode			NCM
Anode			Gr.
Capacity	1C	Ah	51
Size		mm	26.5*148*91
Weight*		g	<880
Nominal Voltage	1C	V	3.62
Energy density		Wh/L	>515
Energy density		Wh/kg	>210
SOC window		%	15~95
Operation range			-30~55
Usage voltage		V	2.8-4.2
Cycle	1C/1C DOD80%	cycles	≥3000
DC-IR	10s SOC50%	mohm	<1.3
Power*	10s SOC50%	W	≥1300
Max. current	10s	A	416

Product Info.



EV MEB

PHEV VDA

NCM
NCMA
NMx
LFP



EV L-6

NCM
NMx



LEV
21*70 (mm)



EV
46x90 (mm)

NCM



HEV

4.8*206*85 (mm)



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