

[HPB] Solid-State Battery



Safer.
non-flammable
electrolyte



Longer lasting.
10x longer cycle life*



Greener.
50 % better
environmental
balance**

* compared to conventional lithium-ion batteries under comparable stresses
** calculated by external experts

Main Applications

Home storage

Charging
infrastructure

Wind energy

Solar energy

Control energy

and many more

Engineered to store renewable energy in a safer and more sustainable way.

High Performance Battery Technology GmbH (HPBT) has developed an advanced solid-state battery that offers safety, a tremendous battery lifetime and up to a 50 % better environmental balance. The solid electrolyte – based on an inorganic system – is introduced into the cell in a liquid state using a drop-in process. It hardens within the cell to form the HPB Solid-State Electrolyte. This product is ideal for applications requiring a very long lifetime and/or multiple uses.

Item	Characteristic	Unit
Chemistry	LFP/Graphite	–
Cell Capacity [Ah]	50	Ah
Nominal Voltage	3.2	V
Voltage Range	2.5 – 3.6	V
Cell Dimensions	(L x W x H) 130 x 24.5 x 170 – 180***	mm
Cell Weight	1 – 1.5***	kg
Total Energy (BOL)	160	Wh
Usable Energy (BOL)	160	Wh
Gravimetric Energy Density	110 – 160***	Wh/kg
Volumetric Energy Density	300 – 350***	Wh/l
Usable SOC Range	0 – 100	%
Usable Temperature Range	-40 to 60	°C
Cycle Life	currently 6,000 guaranteed <small>(corresponds to 50 % of the cycles completed today)</small>	cycles (1C/1C, 0–100% SOC, at RT)
Charge Current	continuous 2C/peak 6C	– /60 s
Discharge Current	continuous 2C/peak 6C	– /60 s

*** depending on development optimisation path

High Performance Battery Technology GmbH reserves the right to make changes to this document and without prior notice.

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