

# [HPB] Solid-State Battery



**Safer.**  
non-flammable  
electrolyte



**Longer lasting.**  
min. 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 use.

| 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                 | <b>currently 6,000 guaranteed</b><br><small>(corresponds to 50 % of the cycles completed today)</small> | <b>cycles (1C/1C, 0 – 100 % SOC)</b> |
| Charge Current             | <b>continuous 2C/peak 6C</b>  | – /60 s                              |
| Discharge Current          | <b>continuous 2C/peak 6C</b>  | – /60 s                              |

\*\*\* depending on optimisation path

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

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