

Technical Specifications for SoftBattery®

Reg 1.5V, Mini 1.5V and 3654 3.0V

Reg 1.5V Plus, Mini 1.5V Plus

Enfucell's thin, flexible and eco-friendly SoftBattery® is made with Enfucell allPrinted™ technology. It represents a new generation of battery technology and offers a completely new level of performance in terms of customized dimensions and efficiency in manufacturing process, compared to conventional battery technology.

SoftBattery® is best suited for applications with average power consumption below 1.0 mW. **Improved Plus version is available (below in red), with double peak current.** Typical applications include medical and logistics sensors, pharmaceutical & cosmetical transdermal delivery patches, functional packaging & printing and new disposable applications.

SoftBattery	Reg 1.5V	Plus	Mini 1.5V	Plus	3654 3.0V
Dimensions					
Maximum thickness	0.7 mm		0.7 mm		0.7 mm
Outer dimensions (± 1 mm)	60 mm x 72 mm		36 mm x 46 mm		36 mm x 54 mm
Maximum weight ⁽¹⁾	2.9 g		0.90 g		2.0 g
Performance ⁽²⁾					
Nominal voltage ⁽³⁾	1.5 V		1.5 V		3.0 V
Minimum initial capacity ⁽⁴⁾	90 mAh <i>at 0.6 mA at 1.2 mA</i>		18 mAh <i>at 0.2 mA at 0.4 mA</i>		14 mAh 24 mAh <i>at 8 mA at 1 mA</i>
Initial internal resistance	~50 Ω	~25 Ω	~150 Ω	~75 Ω	~90 Ω
Maximum peak current ⁽⁴⁾	8-10 mA	18-20 mA	3-4 mA	6-8 mA	8-10 mA
Shelf lifetime ⁽⁵⁾	Min. 2 years				
General					
Chemistry	Zinc – Manganese dioxide – Zinc chloride				
Operating temperature ⁽⁶⁾	-35 °C...50 °C (-31 °F...122 °F)				
Operating humidity ⁽⁷⁾	20...90 %RH				

(1) Average for 10 cells.

(2) Temperature 23 °C (73 °F), relative humidity 50 %.

(3) Open circuit voltage 1.5 V...1.8 V and 3.0 V...3.6 V, respectively.

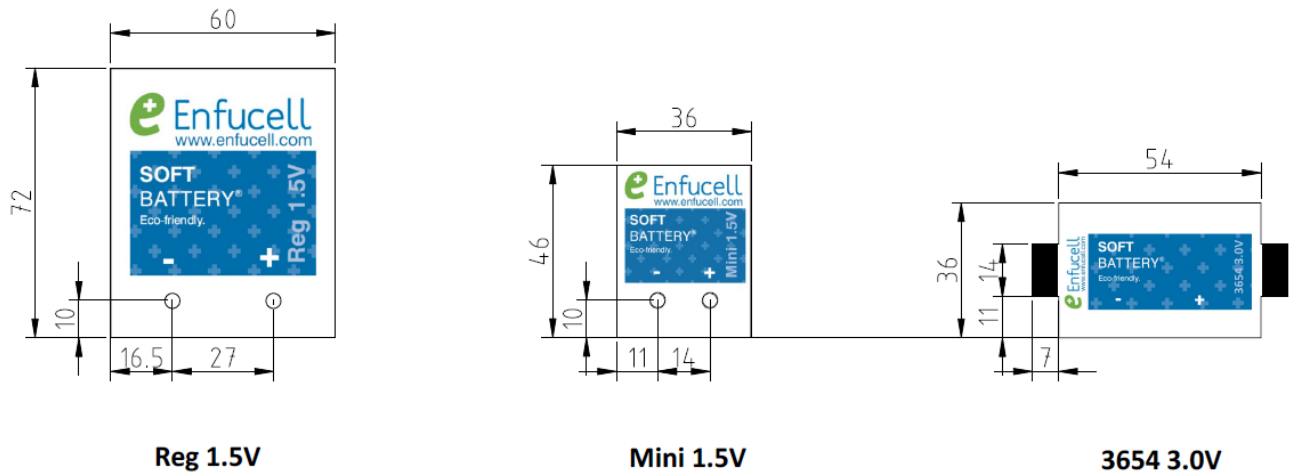
(4) Cut-off voltage 0.9 V and 1.8 V, respectively.

(5) In original battery package at 23 °C (73 °F).

(6) Only limited exposure to elevated temperatures is recommended. Reduced performance at temperatures below 0 °C (32 °F).

(7) Only limited exposure to extreme humidity conditions is recommended.

Bending: SoftBattery® can be attached to a curved surface with a minimum radius of 25 mm. Frequent bending may reduce the performance.



All dimensions are in mm. Tolerances are up to ± 1 mm.
 Anode and cathode terminal holes have a diameter of 4 mm.
 CAD files are available on request.

Customized SoftBattery® versions: Outer dimensions, thickness and shape of battery as well as terminal size and location can be tailored according to customer needs.

Storage: For optimal battery performance, please store the batteries between 0 °C...10 °C (32 °F... 50 °F) and keep them in the sealed bag until use. This will minimize the chemical and physical processes inside the batteries and therefore extend the lifetime.

Materials: Carefully chosen plastic films with optimal characteristics to SoftBattery® performance are used as sealing materials. Standard products have conventional plastic films that are used in packaging industry, but other grades are available on request. Anode and cathode terminals are made of polymer based conductive ink. All materials are RoHS compatible.

Disposal and recycling: Contact your local authorities for disposal or recycling regulations in your area. Inks printed on battery package are non-toxic. Therefore, packaging materials of SoftBattery® can be recycled or disposed of among normal household waste.

Warning: SoftBattery® is not rechargeable, attempt to recharge will damage the battery.

Warranty: All specifications and technical advice are based on our most current knowledge and experience. The application use and processing of the SoftBattery® products are beyond our control and, therefore, entirely at your own responsibility.

Further information and recommendations for attaching and connecting SoftBattery® to applications are available on request.