
LTI Lithium Built-in Batteries

Liberating Technologies, Inc. has introduced more Built-in Lithium Batteries and recharge modules for prosthetic applications. These new Lithium-Ion and Lithium-Polymer cells offer ample battery capacity in a relatively small, light-weight package. Built-in batteries provide versatility for the prosthetist because they can be installed in any convenient space within the socket, eliminating unsightly bulges in the outer shell and resulting in better cosmesis and weight distribution.

Six capacities and configurations are available:

- BP88** Lithium AA Split-cell – 750 mAh
- BP98** Lithium AA Standard – 750 mAh
- BP101** Polymer Miniature – 200 mAh
- BP102** Polymer Split-cell – 750 mAh
- BP103** Polymer Split-cell – 450 mAh
- BP104** Polymer Split-cell – 900 mAh

The original Lithium-ion battery series are AA-cell configurations for maximum density in a compact space. With 750 mAh capacity, this battery is suitable for pediatric and adult prostheses. It is offered in two configurations to suit the application; the cells can be attached (BP98) or separated/split-cells (BP88).

The Miniature Lithium-Polymer battery (BP101) is intended for small pediatric prostheses such as the VASI 0-3 electric hands. This battery has a capacity of 200 mAh and is suitable for small children's upper-limb applications but generally not for adult prostheses. If more capacity is needed, the 450 mAh Split-cell Battery (BP103) is a good alternative.

The large capacity Split-Cell Lithium-Polymer battery (BP102) was designed to give the clinician the ability to separate the relatively thin cells and place them in a convenient location within the socket. This 750 mAh battery is suitable for pediatric and adult applications. If even more capacity is required, the 4-Cell Lithium-Polymer Battery (PB104) with 900 mAh is an option.

Lithium batteries have several advantages over conventional Nickel-Cadmium and Nickel-Metal-Hydride. Most significant is their high-density which accounts for their large capacity, light-weight and relatively small size. Lithium cells are about 35% lighter than Ni-Cad and 50% lighter than NI-MH cells. For a given size, they deliver more than twice the capacity of Ni-Cad and about 20% greater voltage. They have a protection circuit to prevent over-discharging and they can be recharged in about 90 minutes, depending on the state of charge. They also don't suffer from "memory" problems often encountered with Ni-Cad batteries. They can be topped-off with a brief charge at any time to assure that they are always at or near full charge.

These new built-in Lithium batteries are supplied with one of LTI's on/off switch - recharge modules (Fig 1). These are available in standard and low-profile versions and are compatible with all manufacturer's terminal devices. For Otto Bock 2000 hands, a voltage regulator must be used (order MC41). This is placed in-line with the LTI battery.

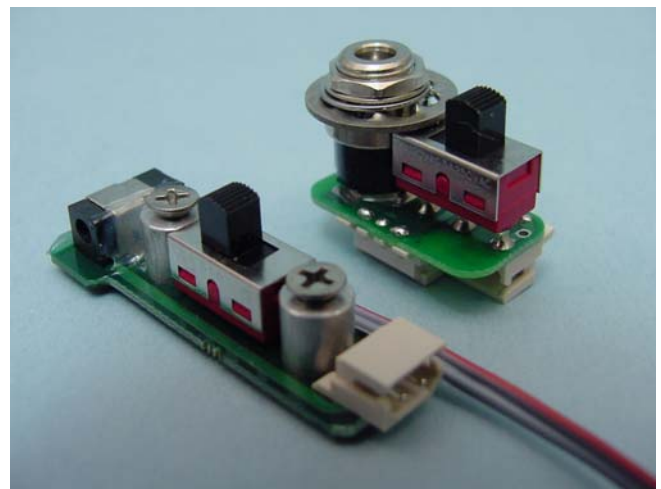


Fig 1 – Sample of on/off switch - recharge module

LTI Liberating Technologies, Inc.

325 Hopping Brook Road, Suite A, Holliston, MA 01746-1456

www.liberatingtech.com

Phone 508-893-6363 FAX 508-893-9966



Fig 2 – **BP88** Split-cell Li-ion Battery

BP88 Split-cell AA Lithium-ion Built-in Battery

Capacity: 750 mAh
 Voltage: 7.4 volts (nominal)
 Current: 3 Amps
 Weight*: 53 grams
 Dimensions: 14 x 27 x 50 mm (combined cells)
 Charger: LTI model BC96

* total weight, including on/off switch module



Fig 3 – **BP98** Standard Li-ion Battery

BP98 Standard AA Lithium-ion Built-in Battery

Capacity: 750 mAh
 Voltage: 7.4 volts (nominal)
 Current: 3 Amps
 Weight*: 53 grams
 Dimensions: 14 x 27 x 50 mm
 Charger: LTI model BC96

* total weight, including on/off switch module



Fig 4 – **BP101** Miniature Li-Polymer Battery

BP101 Miniature Lithium-Polymer Built-in Battery

Capacity: 200 mAh
 Voltage: 7.4 volts (nominal)
 Optional 5 volt regulated
 Current: 2 Amps
 Weight*: 23 grams
 Dimensions: 10 x 27 x 32 mm
 Charger: LTI model BC100

* total weight, including on/off switch module

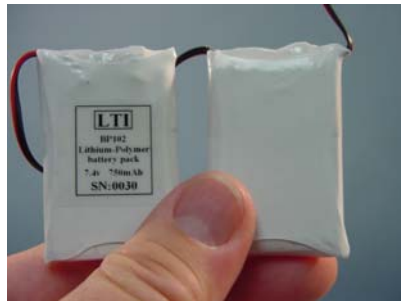


Fig 5 – **BP102** Split-cell Li-Polymer Battery

BP102 Split-cell Lithium-Polymer Built-in Battery

Capacity: 750 mAh
 Voltage: 7.4 volts (nominal)
 Current: 3 Amps
 Weight*: 40 grams
 Dimensions: 12.5 x 30 x 49 mm both cells
 Charger: LTI model BC96

* total weight, including on/off switch module



Fig 6 – **BP103** Split-cell Li-Polymer Battery

BP103 Split-cell Lithium-Polymer Built-in Battery

Capacity: 450 mAh
 Voltage: 7.4 volts (nominal)
 Current: 2 Amps
 Weight*: 35 grams
 Dimensions: 12 x 18 x 52 mm
 Charger: LTI model BC100

* total weight, including on/off switch module