

Thin-Film Battery

molex

Molex's Thin-Film Battery is a low-profile, flexible, disposable battery with a small footprint designed for low-power single-use applications

Features and Advantages

Flexible and low-profile

Can be applied on a curved surface with a bend radius of 25mm or greater

No heavy metals

Offers an economical, environmentally safe alternative to lithium

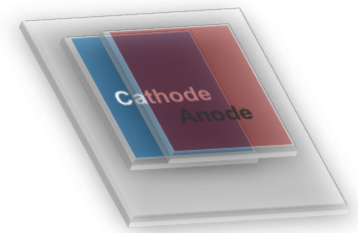
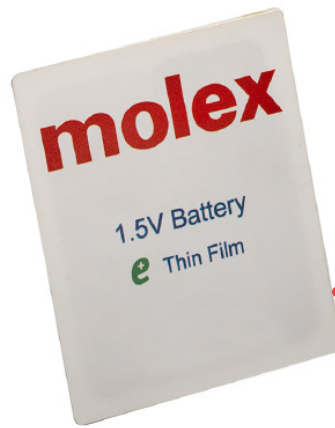


Illustration of Thin-Film Battery With Vertically Stacked Construction



Thin, flexible form factor

Supports design flexibility appropriate for a wide variety of products

Reduced distance between anode and cathode

Vertically stacked construction provides the following compared to single-layered construction:

- Reduced internal resistance
- Increased peak current
- Increased usable capacity
- Reduced footprint

Available in 1.5 and 3V configurations

Delivers power suitable for low-power disposable application

Applications

Consumer

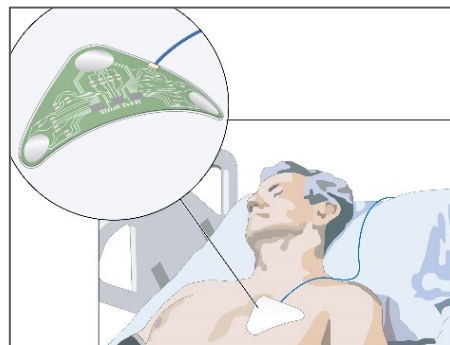
- Wearable Electronics
- Biometric Monitoring Devices
- Sports Monitoring Devices

Medical

- Patient monitoring devices
- Biosensors
- Diagnostic and therapeutic devices
- Blood-glucose monitoring
- Respiratory monitoring
- Drug delivery

Industrial and IoT

- Smart labels and tags
- Perishable Goods Monitoring
- Environmental Sensors



Disposable Patient Monitoring Device



Smart Labels

SPECIFICATIONS (Typical CC 1.5 and CC 3.0 Configurations)

REFERENCE INFORMATION

Packaging: Sealed Bag
 Designed In: Millimeters
 RoHS: Yes
 Halogen Free: Yes
 Anode Contact Pad: Zinc-Carbon Blend
 Cathode Contact Pad: Carbon Ink

CHEMICAL

Chemistry: Zinc – Manganese dioxide – Zinc chloride

PHYSICAL

Thickness: 0.7mm
 Bending Radius: > 25.00mm
 Operating Temperature: -35 to +50°C[§]
 Operating Humidity: 20 to 90% RH**
 Compliant with the European battery directive 2006/66/EC

[†]Cutoff voltage 0.9V and 1.8V respectively

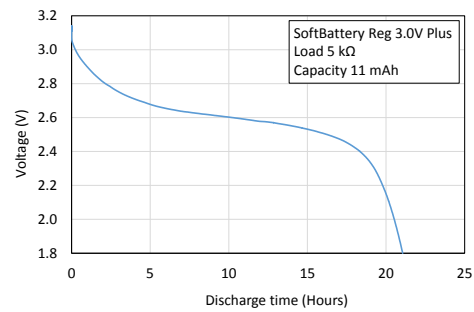
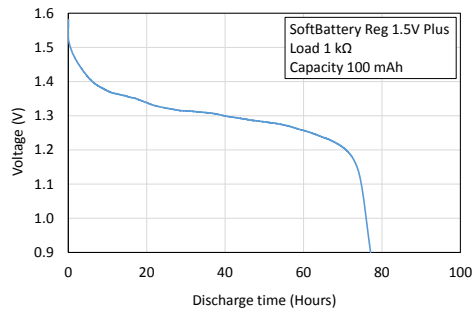
[‡]In original battery package at 23°C

[§]Only limited exposure to elevated temperatures is recommended.

Reduced performance at temperatures below 0°C.

^{**}Only limited exposure to extreme humidity conditions is recommended.

| Attribute | CC 1.5 | CC 3.0 |
|---------------------------------|---------------------------------------|----------------|
| Voltage (V) | 1.5 | 3 |
| Size (mm) | 60 x 72 | 60 x 42 |
| Weight (g) | 2.9 | 1.4 |
| Min. Initial Capacity (mAh)* | 90mAh at 1.2mA | 10mAh at 0.4mA |
| Initial Internal Resistance (Ω) | 25 | 150 |
| Maximum Peak Current (mA) | 18-20mA | 6-8mA |
| Shelf Life (years) [‡] | 2 Years in original packaging at 23°C | |



Ordering Information

| Order Number | Description |
|--------------|--|
| 13299-0001 | Thin-Film Battery, 3.0V Plus, Flexible, Disposable |
| 13331-0001 | Thin-Film Battery, 1.5V Plus, Flexible, Disposable |

www.molex.com/link/thin-filmbattery.html