



**Lithium reserve batteries for smart weapons
and electronic fuzing applications**





The Power Sources Center is the leading producer of lithium reserve batteries in the U.S. We have provided state-of-the-art batteries to the U.S. Army for over 44 years and have delivered over 30 million primary batteries to the DoD and allied governments.

**Custom
High-Performance
Energy Sources**

Electrochemical Systems Offered:

- Lithium/Thionyl Chloride (Li/SOCl₂)
- Lithium/Sulfuryl Chloride (Li/SO₂Cl₂)
- Lithium/Sulfur Dioxide (Li/SO₂)
- Lithium/Vanadium Pentoxide (Li/V₂O₅)
- Lithium Silicon/Iron Disulfide (LiSi/FeS₂)

Smart Weapons / Electronic Fuzing Batteries

Description	Discrete Cell Batteries			
Note: Drawings not to scale. All measurements shown in inches.				
Device Number	G3168B1	G3165A4	G2666B1	G3147A1
Voltage (v)	2.5 to 4.25	2.5 to 4.25	2.5 to 3.6	2.5 to 3.6
Current (mA)	0.250	20	0.5	0.5
Capacity (mAh)	2.0	3.4	280	280
Weight (oz/gm)	0.02/0.5	0.07/2.0	0.18/5.1	0.22/6.2
Acceleration Cap. (G)	25,000	75,000	15,000	30,000
Electrochemistry	Li/SOCl ₂	Li/SOCl ₂	Li/SOCl ₂	Li/SOCl ₂
Activation Mechanism	Stab initiated, no spin required	Gun launch, spin required	Primer or stab initiated, no spin required	Primer or stab initiated, no spin required
Activation Time(s)	60.0	0.025	0.5	0.8
Typical Applications	Sub-munitions	Medium caliber projectile fuzing	Long post-activation life	Artillery fuzing, High-G launch hardened

Long Shelf Life

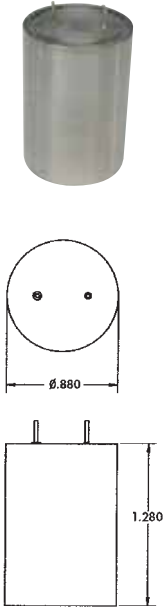
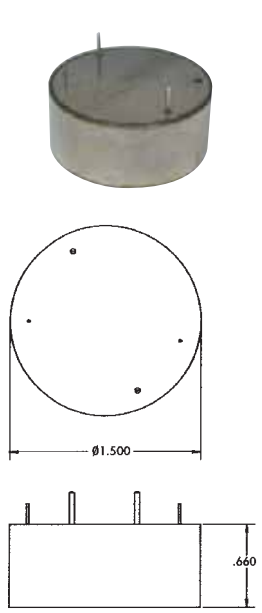
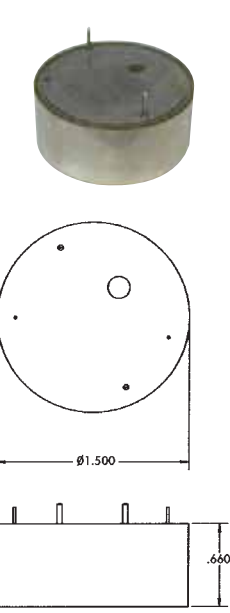
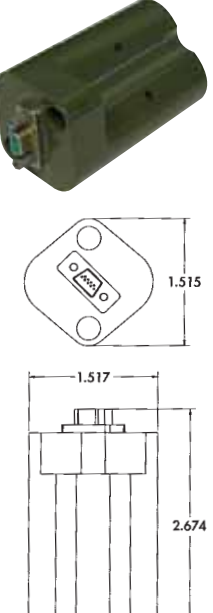
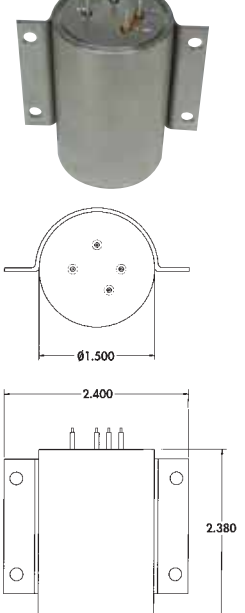
Lithium reserve batteries are unique in their ability to last for over 20 years prior to activation. This long shelf life is made possible by storing the electrolyte separately from the electrodes until activation by external means (mechanical, G force or electrical power.)

Products Offered:

- Lithium ambient temperature reserve batteries
- Lithium thermal batteries
- Lithium ion rechargeable batteries

Environmentally Hardened

Our lithium reserve batteries are optimized for operation in high acceleration environments (up to 100,000 g's) and high spin rate (30,000 RPM) applications that ordinary batteries cannot survive. They are also capable of operation across the full military temperature range (-50°F to +160°F/-45°C to +71°C).

Multi-cell High Voltage Batteries				Thermal Battery
				
G3153B1	G3158B1	G3161A1	G3177A1	G3190B2
25 to 39.1	5.6 to 12.0	5.6 to 12.0	5.5 to 7.5	22 to 32
500	350	350	36	700
8.0	30	30	350	20
1.81/51.2	2.50/71.0	2.01/57.0	2.82/80.0	8.82/250.0
55,000	30,000	30,000	15,000	30,000
Li/SOCl ₂	Li/SOCl ₂	Li/SOCl ₂	Li/SOCl ₂	LiSi/FeS ₂
Gun launch, no spin required	Gun launch, spin required	Primer initiated, spin required	Electric primer initiated, no spin required	Electric igniter
0.025	0.1	0.1	2.0	<0.5
Tank munitions, Electronic safe & arm fuzing	Artillery fuzing, projectiles	Electronic fuzing, projectiles, bombs	Guidance, data hold functions, projectiles	Air delivered weapons & projectiles – extended temperature range

The Power Sources Center has a skilled workforce and the facilities required to design, develop, manufacture and test lithium batteries.

In addition to serving military markets, EnerSys designs and produces batteries for a wide variety of applications, including space, medical, specialized industrial and commercial uses.

The EAS Power Sources Center is your energy source. Whether it is a custom battery or a configuration requiring high-volume automated production, EnerSys can provide the lithium power source that meets your needs.

The Power Sources Center located in Horsham, PA features:

- A 52,000 sq. ft. modern facility
- 40,000 sq. ft. of manufacturing space
- 7,000 sq. ft. of dry-room space
- Extensive laser welding capability
- An in-house machining and tool room
- Short production runs and prototyping
- Multiple production lines for maximum flexibility
- Extensive battery testing equipment and expertise
- ISO 9001 certified
- U.S. owned company/U.S. manufactured batteries



104 Rock Road
Horsham, PA 19044
Phone: 215-674-3800
Fax: 215-773-5499
Email: aerodefense.sales@enersys.com
www.enersys.com/defense/EAS



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