

LC0800-380-ASW



APPLICATIONS

- Start-up Power supply
- Industrial Backup Power
- Energy Harvesting
- Remote Power Supply
- Peak Load Shaving



FEATURES & ADVANTAGES

- 1M Cycles Lifetime
- 10 Years Calendar Life
- Low Self-Discharge
- Safe: No Thermal Runaway
- High Power Density

Specifications

Capacitance	Rated ¹	800F
	Minimum initial	800F
Voltage	Nominal	3.8V DC
	Minimum	2.2V DC
	Maximum ²	4.2V DC
ESR	Typical ¹	12mΩ
	Maximum initial	15mΩ
Current	Maximum continuous current ($\Delta T = 15^{\circ}\text{C}$) ³	25A RMS
	Maximum continuous current ($\Delta T = 40^{\circ}\text{C}$) ³	60A RMS
Energy Storage	Max energy ⁴	1.6Wh
	Usable energy ⁵	1.1Wh
	Volumetric energy density ⁶	18.3Wh/liter
	Gravimetric energy density ⁷	9.3Wh/kg
Self Discharge	Voltage drop after 6 months at 25°C	<8%

Temperature

Temperature Characteristics	Operating Temperature Range	-10°C to +65°C
	Storage Temperature Range	-10°C to +70°C

Standards, Safety & Environmental

Safety	Short Circuit Current	253A
	<ul style="list-style-type: none"> • This product may vent or rupture if overcharged, reverse charged incinerated or heated above 100°C • Do not crush, mutilate, or disassemble • Do not dispose of unit in trash 	

Service Lifetime

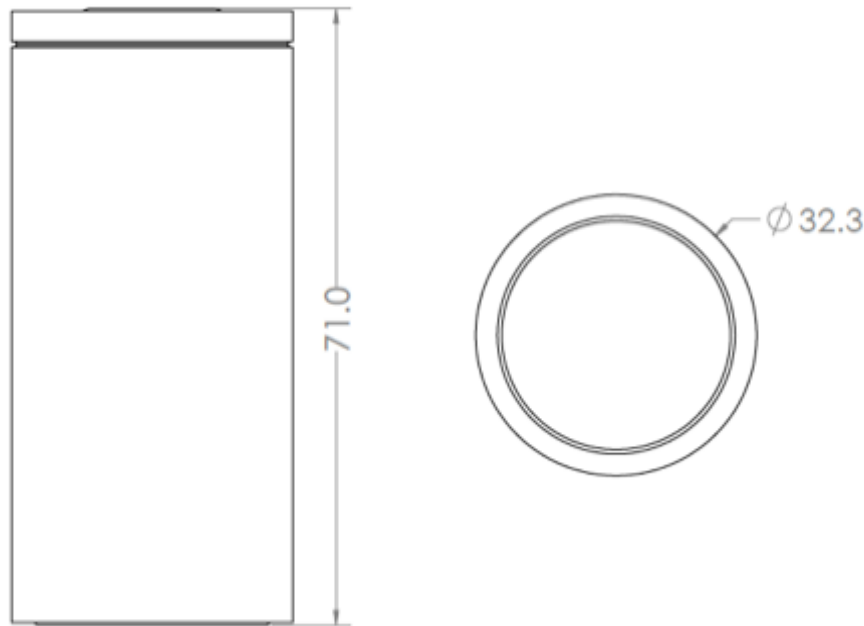
Endurance	Product held at nominal voltage in 65°C environment for 2000 hours	
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
DC Life	Product held at rated voltage in 25°C environment	
	Life (projected)	10+ years
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
Cycle Life	Cycling from V_{nom} to V_{min} under constant current in 25°C environment	
	Life (projected)	>1M cycles
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
Storage Life	Stored uncharged in original packaging in 25°C environment	
	Life	4 years

Physical Characteristics

Mechanical	Vibration	IEC60068-2-6, SAE J380
	Shock	IEC60068-2-27, SAE J2464



Outline Drawings:



Weight and Size:

Weight: 115g | Size: 71.0 L/mm, 32.3 D/mm

Naming Rules:

Type		Capacitance	Dash	Rated Voltage	Dash	Termination
LC	Lithium Ion Capacitor Cell	0800 = 800F	-	380 = 3.8V	-	ASW = Axial Spot Weld

Notes:

1. Measure capacitance and DC internal resistance at 25°C under 10A CC test current per Figure 1
2. Maximum voltage is non-repeatable and duration cannot exceed 1s

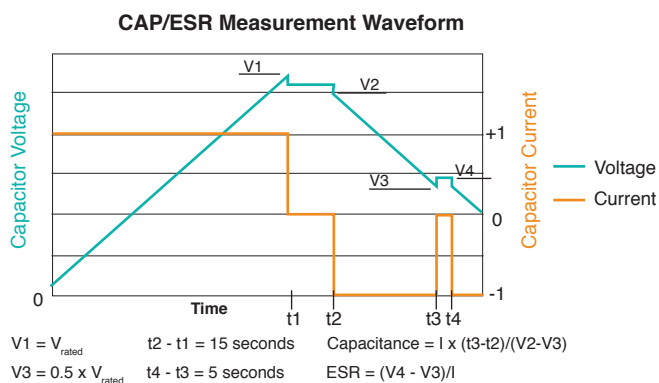


Figure 1

3. $\Delta T = I_{rms}^2 \times \text{ESR} \times R_{ca}$
4. $0.5C(V_{nom}^2)/3600$
5. $0.5C(V_{nom}^2 - V_{min}^2)/3600$
6. $Wh_{usable} / \left(\frac{\pi r^2 (\text{mm}) \times L (\text{mm})}{1 \times 10^6} \right)$
7. $Wh_{usable} / \text{weight (kg)}$



Specifications are subject to change without notice.