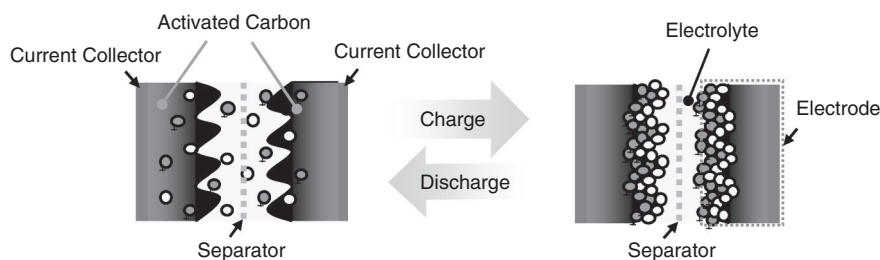


# Green-Cap (ELECTRIC DOUBLE LAYER CAPACITORS)

Electric double layer capacitor(EDLC) is a next-generation energy storage device. In recent years, there has been much exploration of new uses for EDLC, and it is expected that they will become even more commonly used in the future.

## What is electrical double layer capacitor (EDLC)?

A conventional capacitors have a dielectric sandwiched between two opposing electrodes. An aluminum electrolytic capacitor, as an example, uses an aluminum oxide film as a dielectric. However, EDLC does not have a dielectric. EDLC uses the electric double layer to function as the dielectric of activated carbon, therefore EDLC does not use a chemical reaction such as a redox reaction but rather store electricity by means of the physical adsorption of ions to the large specific surface area of activated carbon. EDLC consists of environmentally friendly active carbon and an organic solvent, whereas a conventional battery is made from heavy metals such as lead. EDLC does not harm the environment.



Electric Double Layer Capacitor Principle

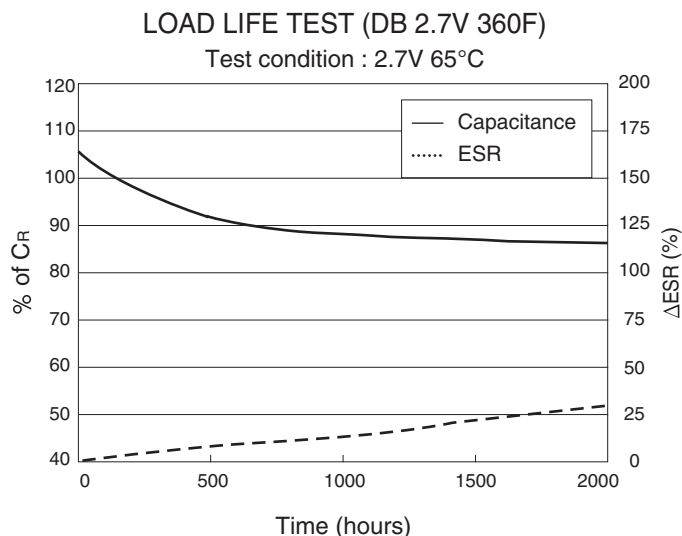
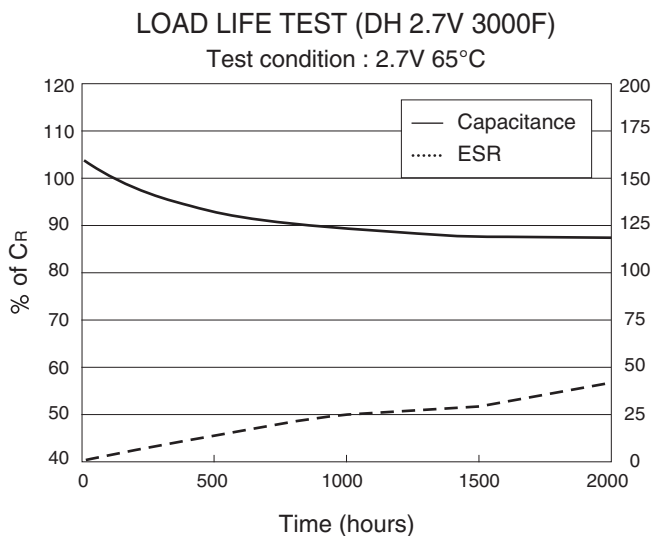
## Product Features

- ▷ Stable charge and discharge cycle
  - Life is not affected by charging/discharging cycles because there is no chemical reaction
- ▷ The advantages of EDLCs over rechargeable batteries
  - Very safe, No risk of explosion or ignition
  - Environmentally-friendly, with no heavy metals used
  - Rapid charging and discharging (at heavy current )
  - Long cycle life, charging / discharging tens of thousands of times
  - Wide range of temperatures, operation even at low temperatures
  - Recycling is unnecessary (required for batteries)
- ▷ Character of Energy Storage Device

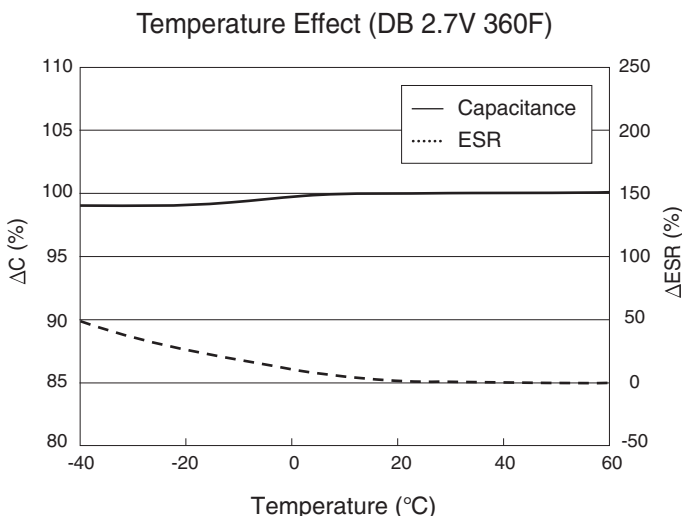
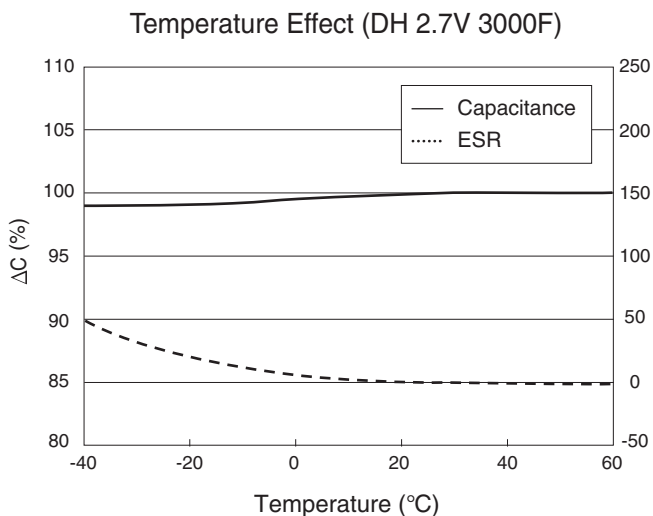
Section		EDLC	Ni-MH	LiB
Voltage (Operating Range)		2.7 (2.7 ~ 0)	1.2 (1.4 ~ 0.9)	3.7 (4.2 ~ 3.0)
Operating Temperature Range		-40 ~ 65°C	Charge : 0 ~ 45°C	Charge : 0 ~ 45°C
High Temperature Spec.	Test Condition	Max. Operating Temp. and Max. Operating Voltage	Cycle life by Temperature	Max. Operating Temp. and Max. Operating Voltage
	Guarantee	1500hrs	0 ~ 20°C: 500 cycle	168hrs
Electrolyte	Solvent	AC / PC	KOH	EC
	Salt	Salt		LiPF6
Dangerous		None	Corrosiveness	Firing, Explosion
Eco - friendly		Very good	Good	Bad

## Technical Data

### CHART 1



### CHART 2



### CHART 3

