Stable and long cycle life capacitor That's an EVerCAP®

Recommended application / Proposed application examples

Energy storage

Substitute for conventional batteries

1. Power supply for standby electricity

EVerCAP® can contribute to Power-saving and environmentally friendly applications that use storage devices for standby electricity such as: Televisions, Air conditioners, Wireless remote controller, or game equipment.

2. Power supply for back-up

As a short time backup to various standard power utilities it is lighter weight and has a longer life when compared to lead-acid batteries used in the same application.

3. Emergency power source for life maintaining equipment

Using the EVerCAP® in power supply for lifeline equipment, the exchange of batteries is not necessary, and a virtually maintenance-free environment is achieved.

4. On-site power supply

Using the EVerCAP®'s with solar batteries, they become the power supply for street lights and flashing road markers.
If electricity is accumulated even in small amounts, or if it is collected from souces that dissipates away as energy that cannot be used with a converter, the EVerCAP® will become a power source. It is also useful for hobbyists or outdoors for power supplies.

High Input/Output Load leveling for system protection

Loading leveling for system protection can be done using the EDLC.

1. Load leveling in Control Systems - To make efficient use of electronic equipment load leveling between daytime and night time usage to assist in power saving. EDLC's can be used for storage in these applications.

① Solar battery system (Regional Management of electric power system, etc.)
② Wind power generation system (Regional Management of electric power system, etc.)
③ Wind power generation system (Longer life can be achieved by leveling the current from largescale generators.)

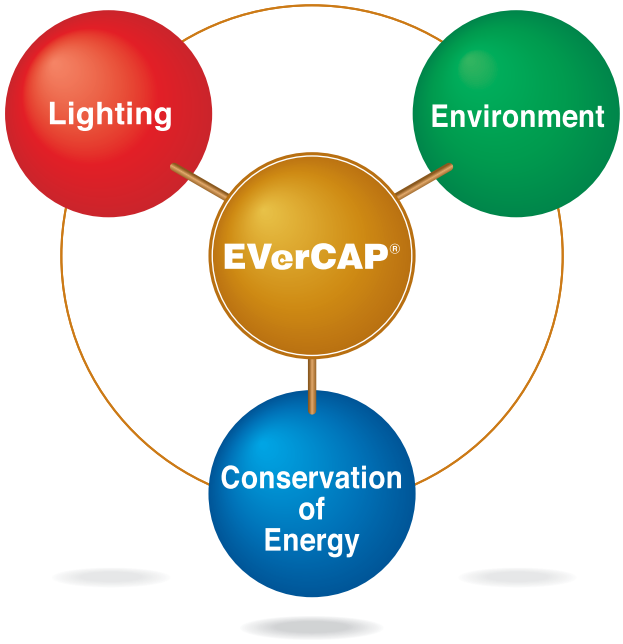
2. Assists in electrically-powered equipment and regenerative power systems for automotive applications.

EVerCAP® can contribute to the regenerative power system for HEV etc.

Other

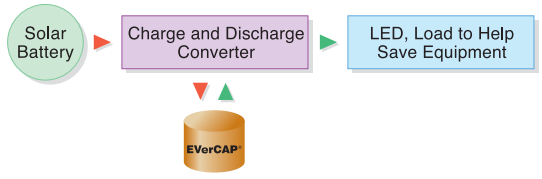
EverCAPs can accumulate and store electricity in small amounts. They can then be used to quickly charge a power supply for outdoor use, for example. So, EverCAPs can amass small amounts of energy and release it in larger amounts.

EVerCAP® Applied Case



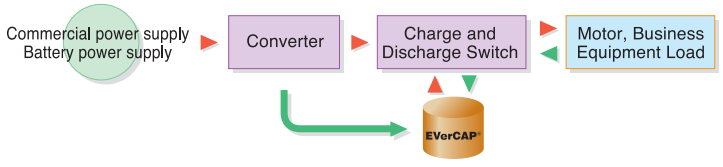
For on-site power supply · back up

A feature of product that is composed of long-life parts such as solar batteries and LED's. The EDLC is used to remove battery exchange. It is assumed that this might be used as an independent power supply because security equipment must operate in case of power outages.



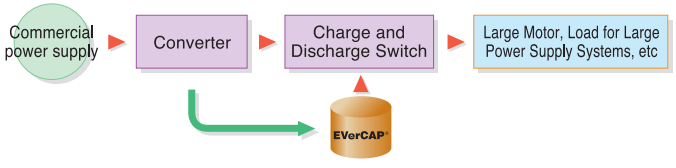
For machinery power

EDLC is used for supplying short inrush current from power supply such as motor for business equipment and actuators. In addition, it also is used for charging during regenerative braking.



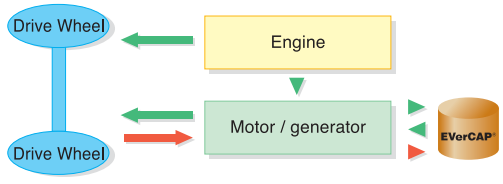
For voltage sag compensator

EDLC can be used in the operation of large-scale equipment as a back up to commercial power. Additionally, there is no need to replace the components for a long time as compared to batteries because the life cycle is much longer.



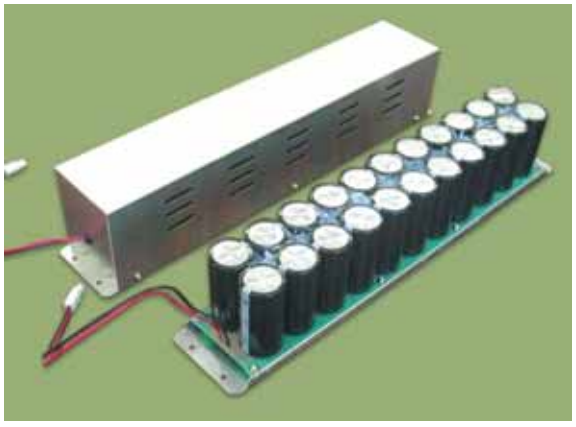
For Automotive

EDLC is used for assisting in suppliance peak power and for capturing regenerative energy during braking in HEV applications. In the case of Electric Vehicles, it is used for supporting battery power. Also, it is suitable for use in the engine start/stop applications.



Higher voltages can be achieved by connecting multiple EVerCAP® units in series. Nichicon has the flexibility to meet our customers' demands and requirements.

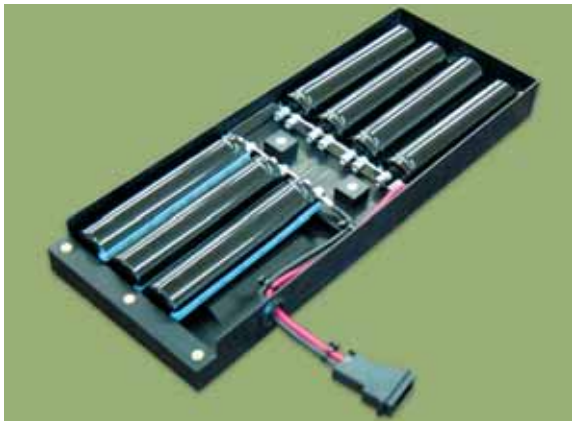
Voltage Sag compensator systems, UPS, in Elevators, and in units for cranes



Rated Voltage : 50V
Capacitance : 10F
Size : 85W × 480L × 90H(mm)
Category Temperature : −25 to +60°C
Maximum Current : 7A

Application example:
- Storage devices for power supply back-up
- Storage devices for an regenerative energy

(2.5V 220F × 22pcs series connection)



Rated Voltage : 15.6V
Capacitance : 170F
Size : 410W × 156L × 39H(mm)
Category Temperature : −25 to +60°C
Maximum Current : 20A

Application example:
- Voltage sag compensator system
- UPS

(2.5V 1200F × 7pcs series connection)

Rated Voltage : 138V
Capacitance : 15F
Size : 560W × 360L × 160H(mm)
Category Temperature : −25 to +60°C
Maximum Current : 150A

Application example:
- Storage device for an regenerative energy
- Voltage sag compensator system
- UPS

(2.5V 900F × 60pcs series connection)

Solar power, wind power generation,Voltage sag compensator system

Application example
- Storage bank for generation system
- Power supply for LED
- Storage device for regenerative energy
- UPS

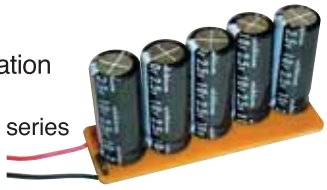
(2.5V 4000F × 20pcs series connection)

Unit
Rated Voltage : 40V
Capacitance : 200F
Size : 700W × 400L × 220H(mm)
Category Temperature : −25 to +60°C

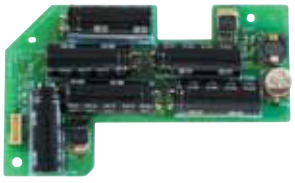
The bank consists on
(11units in series × 3 in parallel)
Rated Voltage : 440V
Capacitance : 55F
Accumulation of electricity energy : 8MJ

Storage unit for separate power source

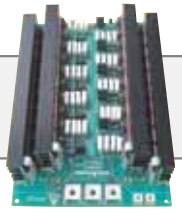
12.5V 2F unit
for office automation equipment
(2.5V 10F × 5pcs series connection)



15V 1.5F unit
for audiovisual equipment products
(2.5V 10F × 6pcs series connection)



Overvoltage protection board



Nichicon offers built-in custom overvoltage protection circuits depending on your requirements.

Example of recommendable applications for "EVerCAP®"

Storage function (as an alternative to a conventional storage battery)

1. Stand-by power source
   Employing "EVerCAP®" as stand-by electric power for remote controllers such as for TV's, air conditioners and console games will allow energy saving therefore contributing to environmental countermeasures.
2. Back-up power supply
   "EVerCAP®" used as a short-time back-up power supply for various regulated power supplies will reduce weight and the service life is longer than current lead storage batteries
3. Self-generation
   "EVerCAP®" can be used as a power source for a street lamp or a repeater indicator of road when used in combination with a compact solar cell, etc.

Solar cell type LED illuminated approach light:

Recommended Use Case Study

High input/output function (Motor-operated equipment assistant for mechanical motive power systems for vehicles, etc. and regenerative power supply systems) This function exhibits its effectiveness for assistance and regeneration HEV, etc.

Other

"EVerCAP®" can store electricity even at negligible levels. Immense electric power is produced using a switchboard if electricity is collected from energy that has been unusable and/or discharged.
Therefore, "EVerCAP®" can be fully employed as an outdoor power source for fun as well.