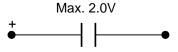


Connecting DYNACAPTM in Series

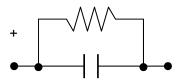
ELNA's DZ series electric double layer capacitor (DYNACAP™) at 2.5V rated voltage, can be connected in series to achieve a higher rated voltage.

Below are basic circuit diagrams to follow. It is important that the circuit is designed to prevent over-voltage, otherwise the balance collapses with each individual capacity difference, and an over-voltage increase to an individual capacitor can occur.

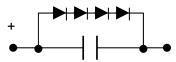
1. Low voltage of each single cell (allow margin to keep voltage under 2.5V). For example, recommend maximum of 2.0V for cap rating of 2.5V.



2. Put in balance resistance. Energy loss can occur due to the equality of voltage by put in resistance and current flow.



3. Use a diode. Over-voltage to the capacitor is reduced by placing several diodes of VF 0.6 \sim 0.8V.



4. Use a Zener diode. By using a Zener diode (3V), when the capacitor has an applied over voltage, it is prevented.

