

Charging Capacitors: $t=0$

- Capacitor is initially uncharged and switch is open. Switch is then closed. What is current I_0 in circuit immediately thereafter?

- Capacitor initially uncharged
- Therefore V_C is initially 0
- Therefore C behaves as a wire (short circuit)
- KLR: $\varepsilon - I_0 R = 0$

$$I_0 = \varepsilon/R$$

