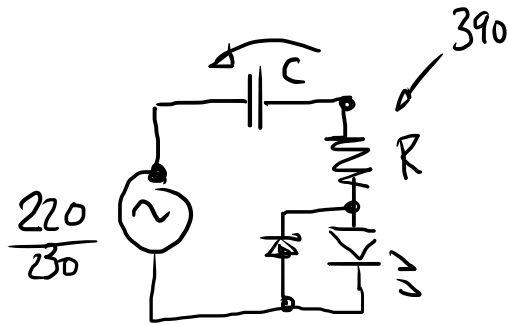


LED 230 V



$$V \approx |Z|$$

$$X_C = \frac{1}{\omega C} = \frac{1}{2\pi f \cdot C} \quad [\Omega]$$

$$230 \leadsto 225$$

$$Z = \frac{V}{i} = \frac{225}{10 \text{ mA}} = 22500 \, \Omega \quad 22,5 \text{ k}\Omega$$

$$C = \frac{1}{\underbrace{2\pi \cdot 50}_{10^2} \cdot 22,5 \cdot 10^3} = \frac{1}{\pi \cdot 22,5 \cdot 10^5} = 141 \cdot 10^{-9} = \underbrace{141 \text{ nF}}_{\downarrow} \quad 100/150 \text{ nF}$$