

Calculations

LED Formula

LED Spec:

2.8v (forward voltage) 20ma (current)

Vsupply = 5v (Pi Power) Vf = 2.8v (Led Volts) R = resistor value If = desired current

$V_r = V_{\text{supply}} - V_f$ $R = V_r / I_f$

$V_r = 5V - 2.8V = 2.2V$ $R = 2.2V / 20mA = 110 \text{ ohms}$

Make sure to add some play room, we use a 120 ohms resistor