



LED  
CPTLP630C

$$V_F = 2,338V$$

$$I_C = 80mA$$

$$\rightarrow R = 32,4\Omega$$

on target  $I_B = 4mA$

$$5V - V_F - V_{CEsat} - R I_C = 0$$

$$R = \frac{5V - V_F - V_{CEsat}}{I_C} = 86,5\Omega \sim 34,6mW$$

On target  $I_B = 1mA$

$$(V_{CEsat} = 90mV)$$

$$I_C = 80mA$$

$$V_F = 3,2V$$

$$I_B = 1mA$$

$$\begin{cases} 5V - R_1 I_1 - V_{BEsat} - R I_C = 0 \\ 2V - R_1 I_1 - R_2 I_2 = 0 \end{cases}$$

$$\text{et } I_1 = I_2 + I_B \quad (V_{BEsat} = 0,8V)$$

On fixe  $R_1 = 10k\Omega \rightarrow I_1 = 1,847 \times 10^{-3}A$

Donc  $I_2 = 1,847 \times 10^{-3}A - 1mA = 0,847 \times 10^{-3}A$

$$\rightarrow R_2 = 2987,01\Omega$$

$$R_2 = 3296,11\Omega$$