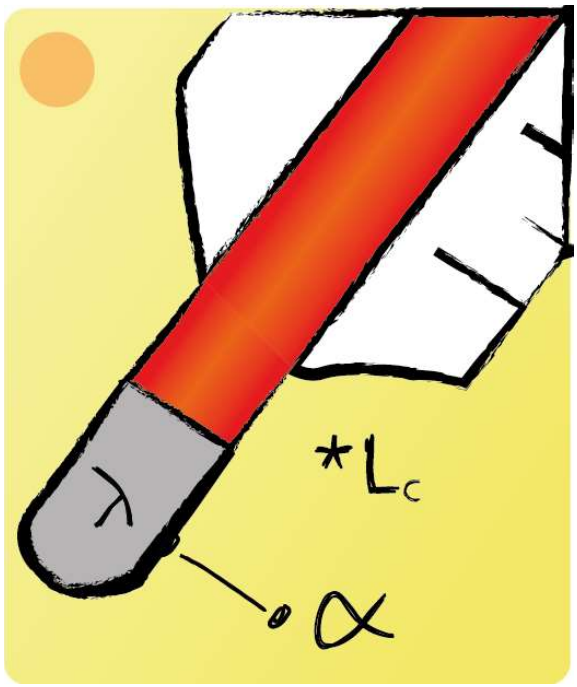
Lecture 15 - Question 3



Check whether the lumped capacity model is applicable for the described situation. Take $\alpha = 78.75$ W/m^{2}K, $L = 1.25$ mm $\lambda = 10$ W/mK.

$$Bi = \frac{\alpha \cdot L_C}{\lambda} = 0.0098\ W/m^2K$$

The lumped capacity model is applicable, since Bi « 1.