

Lecture 15 - Question 3



Check whether the lumped capacity model is applicable for the described situation. Take $\alpha = 75.75 \text{ W/m}^2\text{K}$, $L = 1.25 \text{ mm}$ $\lambda = 10 \text{ W/mK}$.



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

The lumped capacity model is applicable, since $Bi \ll 1$.