



First Lens:  $f = 20 \text{ mm}$   
 $d_o = 45 \text{ mm}$

$$\frac{1}{d_i} = \frac{1}{f} - \frac{1}{d_o} = \frac{1}{20} - \frac{1}{45} \Rightarrow d_i = 36 \text{ mm}$$

Second Lens:  $f = -30 \text{ mm}$

$$d_o = L - d_i = 55 \text{ mm} - 36 \text{ mm} \\ = 19 \text{ mm}$$

$$\frac{1}{d_i} = \frac{1}{f} - \frac{1}{d_o} = \frac{1}{-30} - \frac{1}{19}$$

$$\Rightarrow d_i = -11.6 \text{ mm}$$