

(Str=4) (23-11) $F_{\lambda_1 T - \lambda_2 T} = F_{0 - \lambda_2 T} - F_{0 - \lambda_1 T}$ (Andelen av strålningen som ligger i $[\lambda_1, \lambda_2]$)

a) Sol. $T = 5800 \text{ K}$

$$\lambda_1 T = 0,35 \cdot 5800 = 2030 \mu\text{mK} \quad \lambda_2 T = 2,7 \cdot 5800 = 15660 \mu\text{mK}$$

$$\downarrow \\ F_{0 - \lambda_1 T} = 0,0716$$

$$\downarrow \\ F_{0 - \lambda_2 T} = 0,9721$$

$$\Rightarrow F_{\lambda_1 T - \lambda_2 T} = 0,9721 - 0,0716 = 0,9005$$

92% transmitteras $\Rightarrow 0,92 \cdot F_{\lambda_1 T - \lambda_2 T} = 0,829$

$\therefore 82,9\%$ transmitteras

b) Planta. $T = 300 \text{ K}$

$$\lambda_1 T = 0,35 \cdot 300 = 105 \mu\text{mK} \quad \lambda_2 T = 2,7 \cdot 300 = 810 \mu\text{mK}$$

$$\downarrow \\ F_{0 - \lambda_1 T} = 0,0000315$$

$$\downarrow \\ F_{0 - \lambda_2 T} = 0,000243$$

$$\Rightarrow F_{\lambda_1 T - \lambda_2 T} = 0,000243 - 0,0000315 = 0,0002115$$

92% transmitteras $\Rightarrow 0,92 F_{\lambda_1 T - \lambda_2 T} = 0,0001946$

$\therefore 0,019\%$ transmitteras