$$L_{\text{star}} = 4\pi R_s^2 \sigma T_s^4$$

$$L_{\text{planet}} = 4\pi R_p^2 \sigma T_p^4$$

$$\text{ratio of fluxes} = \frac{L_{\text{planet}}}{L_{\text{star}}} = \left(\frac{R_p^2}{R_s^2}\right)\left(\frac{T_p^4}{T_s^4}\right)$$