

1 The luminosity L of a star is given by $L = 4 \pi r^2 \sigma T^4$

where

r is the radius of the star,

T is the temperature of the star and

σ is a constant with units $\text{W m}^{-2} \text{K}^{-4}$.

What are the SI base units of L ?

- A** $\text{kg m}^2 \text{s}^{-1}$ **B** $\text{kg m}^2 \text{s}^{-2}$ **C** $\text{kg m}^2 \text{s}^{-3}$ **D** $\text{kg m}^2 \text{s}^{-4}$