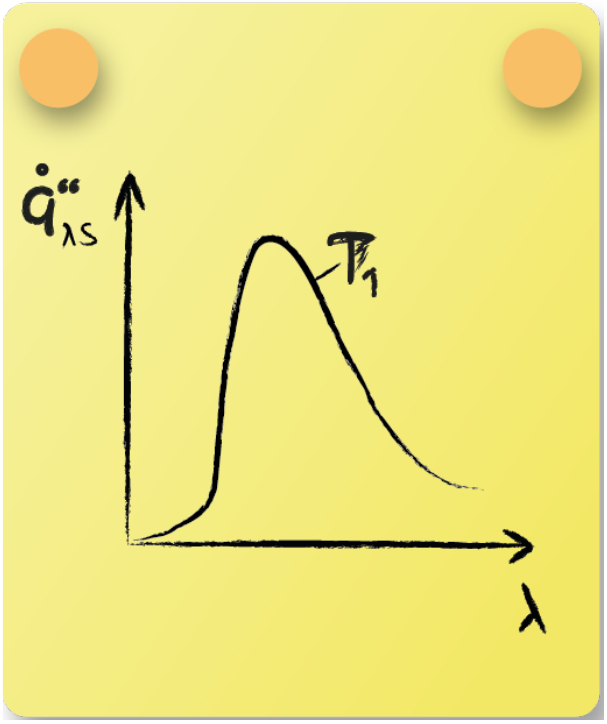
Fundamentals: Task 6



The graph represents planck's law which specifies the spectral electromagnetic radiation density of a black body at a certain temperature T_1.

The integral over the entire spectrum is given by Stefan-Boltzmann's law:

$$\dot{q}''_s = \int_0^\infty \dot{q}''_{\lambda,s} \mathrm{d}\lambda = \sigma T^4$$

It states that the overall radiation density is proportional to the Stefan-Boltzmann constant σ and the fourth power of the body's temperature.