

26 A plane wave of amplitude A is incident on a surface of area S placed so that it is perpendicular to the direction of travel of the wave. The energy per unit time reaching the surface is E .

The amplitude of the wave is increased to $2A$ and the area of the surface is reduced to $\frac{1}{2} S$.

How much energy per unit time reaches this smaller surface?

A $4E$

B $2E$

C E

D $\frac{1}{2} E$