

12 A point source emits 50.0 W of sound in all directions. A small microphone of area 0.85 cm^2 detects the sound at 4.0 m from the source. What is the power detected by the microphone?

A $1.6 \times 10^{-5} \text{ W}$

B $2.1 \times 10^{-5} \text{ W}$

C $2.1 \times 10^{-1} \text{ W}$

D $2.5 \times 10^{-1} \text{ W}$