

31 Two metal plates are a distance of 30 cm apart in a vacuum.

A current exists between the two plates consisting of electrons moving at a constant speed of $1.5 \times 10^6 \text{ ms}^{-1}$.

At any instant, there is always just one electron travelling between the plates.

What is the current between the plates?

A $3.2 \times 10^{-26} \text{ A}$

B $8.0 \times 10^{-13} \text{ A}$

C $1.6 \times 10^{-12} \text{ A}$

D $2.0 \times 10^{-7} \text{ A}$