

**26** Two satellites in orbit around the Earth are at a constant distance of 100 km apart from each other.

Satellite X transmits a microwave pulse towards satellite Y. The pulse takes time  $T$  to reach Y.

Satellite Y then transmits a pulse of visible light towards satellite X.

What is the time taken for the pulse of light to reach X?

**A**  $10^{-5} T$

**B**  $10^{-3} T$

**C**  $10^{-2} T$

**D**  $T$