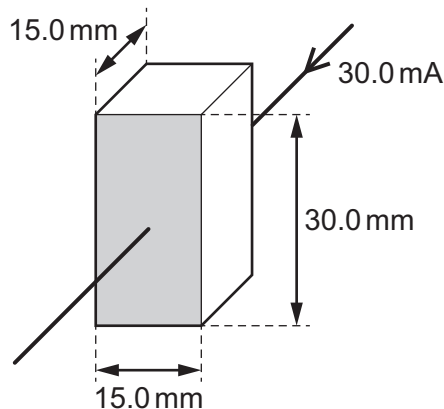


- 4 The current in a block of semiconductor is 30.0 mA when there is a potential difference (p.d.) of 10.0 V across it. The dimensions of the block and the direction of the current in it are as shown.



The electrical meters used are accurate to $\pm 0.1\text{ mA}$ and $\pm 0.1\text{ V}$. The dimensions of the block are accurate to $\pm 0.2\text{ mm}$.

What is the resistivity of the semiconductor?

- A $10.0 \pm 0.2\ \Omega\text{ m}$
- B $10.0 \pm 0.3\ \Omega\text{ m}$
- C $10.0 \pm 0.5\ \Omega\text{ m}$
- D $10.0 \pm 0.8\ \Omega\text{ m}$

- 5 The diameter of a cylindrical metal rod is measured using a micrometer screw gauge