

RESISTANCE — CONNECTION BETWEEN VOLTAGE AND CURRENT

Current will flow if a voltage is applied to the circuit.

= electrons will move if they are **pushed through a complete path**.

The same voltage does **NOT** always produce the same current due to resistance.

RESISTANCE - how **difficult** it is for electrons to flow through the material

- measured in a unit called ohms (Ω) by using an ohmmeter.

RESISTOR - any material that **decreases** the flow of electrons in a circuit.

Ex. Any kind of lightbulb

Ex. Compressed carbon resistors use **colour bands** to indicate the resistance that they provide.

Each colour has a given number value:

| | |
|--------|---|
| Black | 0 |
| Brown | 1 |
| Red | 2 |
| Orang. | 3 |
| Yellow | 4 |
| Green | 5 |
| Blue | 6 |
| Violet | 7 |
| Grey | 8 |
| White | 9 |

1st Band = 1st digit

2nd Band = 2nd digit

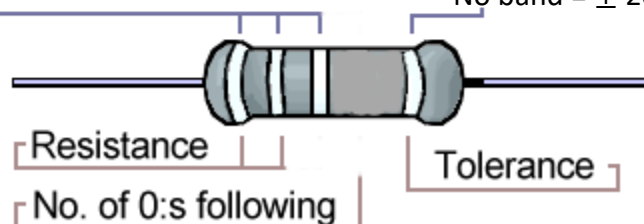
3rd Band = # of zeroes

4th Band = uncertainty / tolerance

Gold = $\pm 5\%$

Silver = $\pm 10\%$

No band = $\pm 20\%$



Example: Red Black Red

