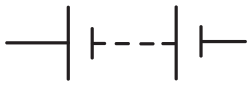
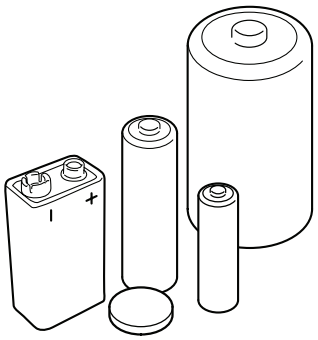
Cell and Battery

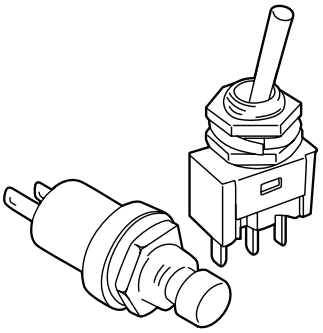




A cell is an electrical power source that produces electricity through a chemical reaction.

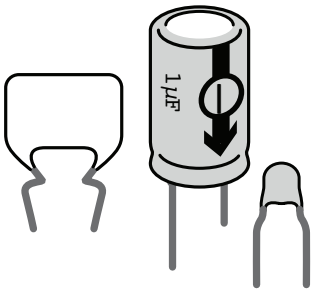
A battery is made from one or more cells joined together in series.

Switch



Used to turn circuits on and off.

Capacitor

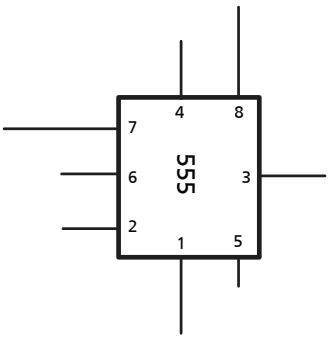


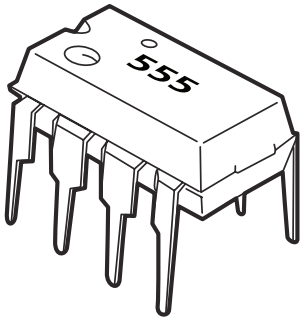
Used to store charge. The amount of charge they can store is measured in Farads (F).

There are two main types:

- Electrolytic (or polarised): These have a positive and a negative terminal and have to be connected the right way round.
- Non-electrolytic (non-polarised or ceramic): These have lower values (up to 1µF) and can be connected either way round.

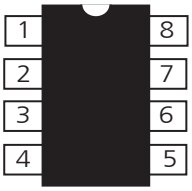
555 timer (e.g. of integrated circuit chip)



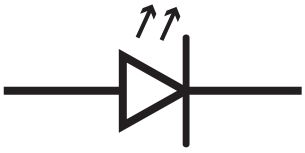


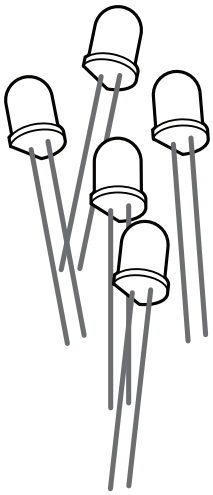
Common and widely used type of integrated circuit (IC).

The pins of the chip are numbered like this:



Light Emitting Diode (LED)

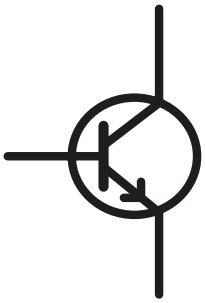


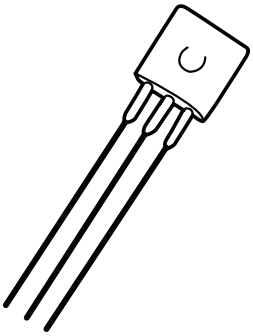


A type of diode that produces light.

A diode is a component that lets electricity pass in one direction only.

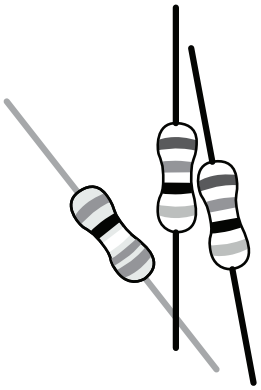
Transistor





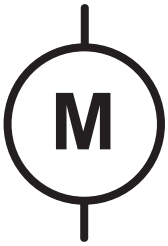
Electronic component used as a switch or an amplifier. They have now been miniaturised so successfully that it is possible to fit thousands into an area 1mm^2

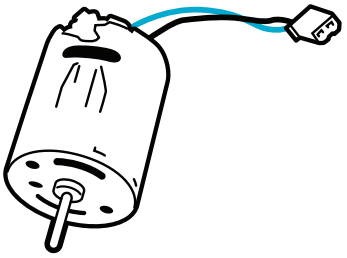
They have three terminals known as the collector, the emitter and the base.



Resistor

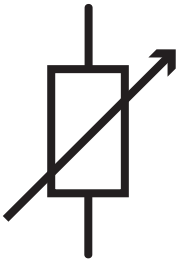
Used to restrict the flow of electricity. Their value is measured in Ohms (Ω).

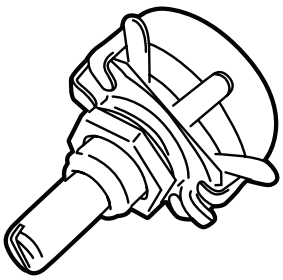




Motor

Device that converts electricity into movement.

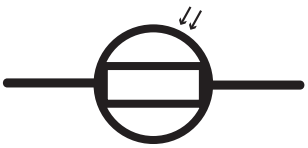


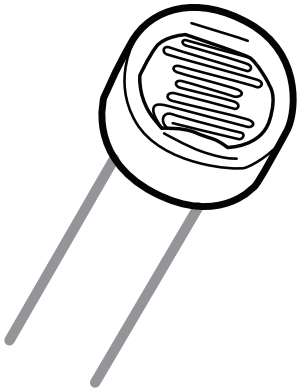


Variable resistor

Used to control the amount of electricity flowing round a circuit. Its resistance can be adjusted to vary how easily electricity can pass through it.

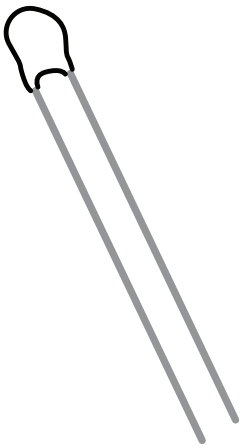
Light Dependent Resistor





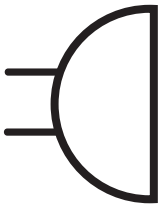
The resistance of this component decreases in response to light.

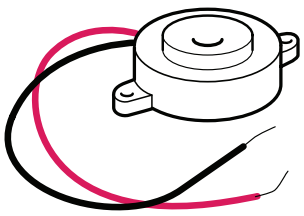
Thermistor



The resistance of this component changes (usually decreases) as the temperature goes up.

Buzzer





Converts electricity into a basic sound.