

Solar Torch Kit

This Solar Torch Kit is a through-hole soldering kit that can be used in two ways. Either on its own as a way of introducing electronics and electronic construction to students over a number of lessons. Or, as part of a larger project involving all aspects of product design, such as designing an enclosure for the electronics to fit into. It can also be used as a teaching aid when tackling subjects such as renewable energy.

Once built you can think of the torch's circuit as having two sections. The first section can store the energy and the second is the energy usage section. The sun's energy is converted to electricity by the solar cell and is then stored in the two capacitors. The diode protects the solar cell from power being discharged back into it. The switch joins the two sections of the circuit together and when engaged allows the capacitors to discharge into the LED. 5 minutes of charging in strong sunlight should result in 5-10 minutes of LED illumination.

The PCB has been designed to allow the solar torch kit to be put into a keyring so that your built torch can go wherever you go. The kit comes with sticky pads that allow you to fix the solar cells to the completed board. There are also 4 M3 mounting holes, one at each corner of the PCB, to allow more sturdy enclosure designs.



Features

- Learn about soldering, electronics and renewable energy with one kit.
- The completed kit can be carried on your keyring
- The PCB has mounting holes for secure fixing

Contents

- 1 x BAT41 Signal diode
- 2 x Electrolytic super capacitors, 2.7V 6.3mm diameter
- 1 x White 5mm water clear LED – 25deg – 2250mCd
- 1 x 150R CR25 0.25W carbon film resistor with 5% tolerance
- 1 x Flat profile tact switch
- 1 x Solar Cells
- 1 x Sticky Fixers Strips
- A Solar torch kit PCB

Dimensions

- 62mm x 30mm x 18mm

