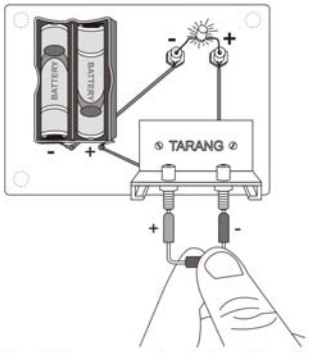
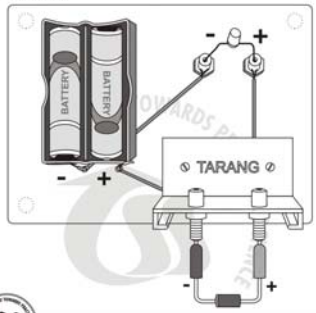


Step 4: Now remove the diode and insert it again with reversed polarities (as shown in the diagram). You will notice that the LED does not glow.



What is going on : In step 3 when you connect the diode, you will be connecting it in such a way that the positive terminal of the diode is connected to the positive of the battery and negative terminal of the diode is connected to the negative of the battery. As a result of it the diode will be in forward bias mode. In this mode the diode offers very low resistance to the flow of current through it and therefore LED glows.

In step 4 you will be connecting the diode in such a way that the negative terminal of the diode is connected to the positive of the battery and positive terminal of the diode is connected to the negative of the battery. As a result of it the diode will be in reverse bias mode. In this mode the diode offers very high resistance to the flow of current through it and therefore LED does not glow.

William Henry Eccles coined the term diode from the Greek roots di meaning "two", and ode meaning "path".

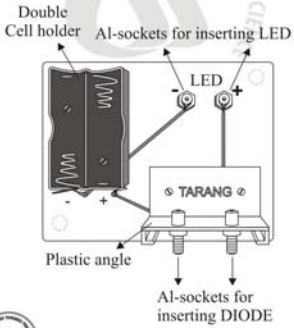
THE WAY TOWARDS PRACTICAL SCIENCE

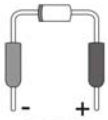
WORKING OF A DIODE

TARANG SCIENTIFIC INSTRUMENTS
DHARWAD
Phone : 0836–2775204
Cell : 94482 31960
www.tarangscientificinstruments.com

WORKING OF A DIODE
Diode allows current to pass through preferentially in one direction only.

Assembly :
Consists of a double cell holder, and a plastic angle (with two aluminum sockets fixed to it at a distance.) fixed on a 3 mm acrylic plate. These two are connected in series with another two aluminum sockets in series. These sockets are fixed at a 10 mm gap between them. These two sockets are used for inserting a LED and the aluminum sockets which are fixed to the plastic angle are used for inserting a diode. A diode with 2 mm banana pins soldered at the two ends bent in U shape and LED are part of the kit.

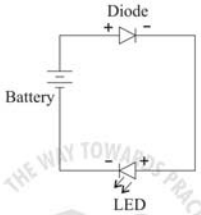




Diode has negative (Cathode) and positive (Anode) terminals. It has white ring near its cathode.

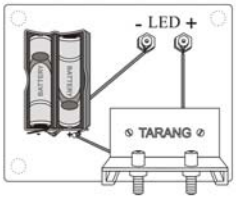
LED has positive and negative terminals which are called Anode and Cathode respectively. Usually the positive terminal is larger in length.

Circuit diagram

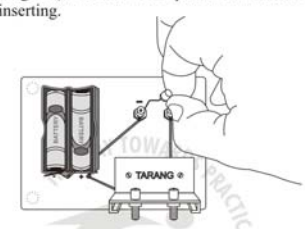


To do and observe.

Step 1 : Insert two pencil cells in the cell holder



Step 2 : Insert the LED in the aluminum sockets provided properly(as shown in the diagram). Check the polarities before inserting.



Step 3 : Insert the diode in the sockets provided for it (as shown in the diagram). While inserting see that the positive terminal of the diode is connected to the positive terminal of the battery. As soon as the diode is connected you will notice that the LED glows.