

# SOLAR ENERGY KIT CAT NO. PH1321



# **Experiment Guide**



## **GENERAL BACK GROUND**

The solar cell consists of layers of semi-conductor material with different electronic properties. Silicon is doped with a small quantity of other semi-conducting material to give it a positive or p-type character. A thin layer on the front of the cell is doped c with phosphorous to give negative or n-type character. When sunlight falls on the solar cell, light knocks electrons from silicon atoms. The freed electrons have extra energy. Internal electric field pushes electrons to front of the cell. Electric current flows on the other cell or to the load.

#### **REQUIRED COMPONENTS**

S.No.	Object	Quantity
1.	Solar Cell	1
2.	Solar Energy Box	1
3.	Connecting Leads	2

#### INTRODUCTION

Now the student can do experiments with solar energy-the energy source of the future.

The Solar photovoltaic modules, when placed in direct sunlight, provide the electrical energy for practical applications.

This kit help to demonstrate how photovoltaic (solar electricity) works. With this you can show how solar cells can be used to produce energy in order to power different devices - LED, **Sound & Fan.** 

## ACTIVITY

- 1. Connect the Solar cell with the Solar energy Kit.
- 2. Face the Solar cell Module towards the 'Sun".
- 3. Keep the knob pointer to sound and Observe the sound coming from the buzzer.
- 4. Now turn the knob to motor & you with see the fan will start rotating.

Note :- In case of Sun not two bright that you have to give a little push to fan.

5. Now turn the knob to Bulb & you will see the light glowing.



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