

Photoelectric cell and their uses: B.Sc. Part-2

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Photoelectric Cells

A photoelectric cell is an arrangement which converts light energy into electrical energy. It is based on the principle of photoelectric effect .

According to their construction photoelectric cells are of three types:

1. Photo-emissive cell,
2. Photo-voltaic cell,
3. Photo-conductive cell.

Applications of photoelectric cells :

As the photoelectric cells convert the changes of light intensity into the corresponding changes in electric current, it has number of applications . The main applications are:

1. They are used in reproduction of sound in the films in cinema houses, in television and in photo telegraphy.

2. They are used in micro photometers for measuring the intensity of light and studying the fine structure of spectral lines.

3. They are used in automatic light switches for switching on and off of street light.

4. They are used in complexion meters. The light reflected from the face of a person falls on a photoelectric cell. As the current produced is proportional to the intensity of the reflected light, hence it as such measures the complexion of the person.

5. They are used in burglar alarms to detect thieves and fire alarms to indicate the outbreak of fire.

6. They are used in photoelectric sorters to sort out the objects or different grades.

7. They are used in meterology to record day-light.

8. They are used for determination of temperature of stars and Planck's constant (h) by cut off method.

9. They are used in photoelectric counters to count objects or persons.