Photocells are based on the photoconductive effect

1) Photoconductive--light increases the flow of electrons and reduces the resistance. 2) Photovoltaic--light makes electrons move between layers, producing a voltage ...

The change in resistance of a photocell when exposed to light is known as the photoconductivity effect. This phenomenon occurs due to the movement of electrons within the photosensitive material, which causes a ...

Advantages and Disadvantages of Photo Conductivity. There are some advantages and disadvantages of Photoconductivity given below: Advantages. Sensitivity to Light: Photoconductive materials can detect a wide range of light wavelengths, including visible, infrared, and ultraviolet, making them versatile for various applications. Speed: ...

The photoconductive cell works based on the principle of the photoconductive effect. The photoconductive effect is a process in which the conductivity of a semiconductor material changes according to the wavelength and intensity of ...

The working principle of a photoconductive cell or LDR or photoresistor is based on the photoconductivity or photoconductive effect. When enough amount of light intensity falls on the semiconductor material, the photons in light intensity energizes the electrons in the semiconductor material to jump from its valance band to the conduction band ...

What is a Photoconductive Cell? Semiconductor light detectors can be divided into two major categories: junction and bulk effect devices. Junction devices, when operated in the photoconductive mode, utilize the reverse characteristic of a PN junction. Under reverse bias, the PN junction acts as a light controlled current source. Output is ...

Semiconductor resistors that depend on the irradiance (photoconductive cells) are based on this principle. They have opened up a wide field of applications and are, among other things, employed in twilight switches and light meters. The semiconductor materials most commonly used are cadmium compounds, particularly CdS.

The essential elements of a photoconductive cell are the ceramic substrate, a layer of photoconductive material, metallic electrodes to connect the device into a circuit and a moisture resistant enclosure. The circuit symbol and construction of a ...

7 Choice of photodiode materials A photodiode material should be chosen with a bandgap energy slightly less than the photon energy corresponding to the longest operating wavelength of the system. This gives a

sufficiently high absorption coefficient to ensure a good response, and yet limits the number of thermally generated carriers in order to attain a low "dark current" (i.e.

Thus, free electrons and holes (charge carriers) are created within the material, and consequently its resistance is reduced. This is known as the Photoconductive effect. The Photoconductive Cell Construction and Working is illustrated in Fig. 20-10 (a), ...

Photoelectric cell is the device which converts light energy into electrical energy. Depending upon the different photoelectric effects employed, the photoelectric cells are of following 3 types. Contents show Photoemissive cell Working Photoemissive cell Advantages Photoemissive cell Disadvantages Photoconductive cell Photoconductive cell Applications ...

The photoconductive cell works based on the principle of the photoconductive effect. The photoconductive effect is a process in which the conductivity of a semiconductor material changes according to the wavelength and intensity of the radiation.

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The essential elements of a photoconductive cell are the ceramic substrate, a layer of photoconductive material, metallic electrodes to connect the device into a circuit and a ...

1) Photoconductive--light increases the flow of electrons and reduces the resistance. 2) Photovoltaic--light makes electrons move between layers, producing a voltage and a current in an external circuit.

Light-sensitive devices, sometimes called photoelectric transducers, alter their electrical characteristics in the presence of visible or infrared light. Photocells are also called by many other names including ...

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