Photocell Characteristics Test Experiment Report

What are the basic characteristics of a photocell?

The basic characteristics of the photocell were tested and analysed through experiments by an optical control experimental platform, such as short circuit current, open circuit voltage, illumination characteristic, volt ampere characteristic, load characteristic, and spectral characteristic.

How to test a silicon photocell?

Open Circuit Voltage Characteristic Testof Silicon Photocell. Under the condition of the Fig2 circuit,the illuminance on photocell is controlle d by illumination meter. Adjust illumination to the meter,at this time the meter readings should be 0. Open the power supply,adjust the illumination read out the voltmeter reading,and fill in table 2.

How to measure photocell current?

Diagram: Procedure: 1. Give a supply of 220V to the lamp. 2. Switch on the lamp and move the lamp from extreme position towards photo cell,there will deflection on micro ammeterat certain distance. Record this distance "d" and reading of photocell current 'I' from Metal +- RL d A Semi conductor Light source docsity.com micro ammeter.

How does a photocell function?

A photocell functions by emitting electrons from the back,which is coated with potassium,when light shines on it. The photoelectric effect was studied under more controlled conditions using a photocell instead of the electroscope experiment.

How do I adjust the nanoammeter reading in a photocell?

Keep the exit-slit of the lamp enclosure along the same line and facing the entrance-slit of the phototube enclosure. For the first part of the experiment (Table 5. Close the photocell entrance-slit and adjust the nanoammeter reading to ~ zero using the 'Zero adj.' knob.

What is a commercial photocell?

A commercial photocell,such as model number 926e,features a disc mounted to one side and at right angles to the emitter. This arrangement allows the photocell to be illuminated without illuminating the collector.

EXPERIMENT: To verify inverse square law of radiations using a Photo-electric cell. APPARATUS: Photo cell (Selenium) mounted in the metal box with connections brought out at terminals, Lamp holder with 60W bulb, Two moving coil analog meters (1000µA & 500mV)

In order to test the designed control system, a photovoltaic module model based on a second artificial neuronal network (ANN) has been obtained from experimental data gathered during 18 months in ...

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A device used to convert light energy into electrical energy is called Photo Electric Cell. Photocell is based on the phenomenon of Photoelectric effect. Photo cell are of three types. 1. Photo-Emissive Cell. 2. Photo-Voltaic Cell. 3. Photo-Conductive Cell.

The photoelectric effect is the key experiment in the development of modern physics. In this experiment, the light from a Hg vapour lamp is spectrally filtered by an interference filter and illuminates a photocell. Inside the photocell there is a metal coated cathode. The annular anode is placed opposite to the cathode. When a photon

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for an electron characteristic of the element, also called the work function (W0). When a photon strikes a bound electron, it transfers its energy to the electron. If this energy is less than the metal"s work function, the photon is re-emitted and no electrons areliberated. If this energy is greater than an electron"s binding energy, the electron escapes from the metal with a ...

EXPERIMENTAL CIRCUIT: PROCEDURE: The experiment can be performed in the laboratory but it is always good to perform it in a dark room where stray light falling on the photocell can be avoided. In the dark room mount the various parts of the apparatus on the wooden plank provided with a ½ meter scale. Make the other connections as shown in the ...

EXPERIMENT NO. 3 OBJECT:- To verify the inverse square law of light using Photocell characteristics. Apparatus:- "MARS" made Photocell Characteristics Apparatus ha s been designed to verify Inverse square law of light. The instrument comprises of the following built-in parts:- 1. Selenium Photo cell mounted in the metal box and connections brought out at ...

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#ExperimentalPhysics #PracticalPhysics #PlanckConstant_h #PhotoCell #ValueOfPlanckConstant #DeterminationOf_h #PhotoVoltaicCell #ExperimentalSetupPhotoCell ...

Photocell Circuit Diagram. The photocell used in the circuit is named as dark sensing circuit otherwise transistor switched circuit. The required components to build the circuit mainly include breadboard, jumper wires, battery-9V, transistor 2N222A, photocell, resistors-22 kilo-ohm, 47 ohms, and LED.

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