

What is the decay time of a photocell?

The decay or fall time is defined as the time necessary for the light conductance of the photocell to decay to  $1/e$  (or about 73%) of its illuminated state. At 1 fc of illumination the response times are typically in the range of 5 msec to 100 msec.

How does a photocell work?

A photocell is a type of electronic sensor that measures and responds to changes in ambient light levels. They consist of a semiconductor material that has a sensitivity to light, such as cadmium sulfide, within a protective casing. When light hits the semiconductor, it changes its electrical properties, causing a change in voltage.

Why do photoresistive cells have a long response time?

Also, photoresistive cells have a long response time requiring many seconds to respond to a change in the light intensity.

How does light history affect a photocell?

Simply stated, a photocell tends to remember its most recent storage condition (light or dark) and its instantaneous conductance is a function of its previous condition. The magnitude of the light history effect depends upon the new light level, and upon the time spent at each of these light levels. This effect is reversible.

What is the sensitivity of a photocell?

The sensitivity of a photocell is defined as its resistance at a specific level of illumination. Since no two photocells are exactly alike, sensitivity is stated as a typical resistance value plus an allowable tolerance. Both the value of resistance and its tolerance are specified for only one light level.

What are the benefits of using photocells in lighting systems?

One of the primary benefits of using photocells in lighting systems is their ability to provide automated control. By detecting changes in ambient light levels, photocells can automatically turn lights on or off when needed, reducing energy usage and costs.

Two questions about photocells Does a typical street light use a CdS photocell and if so will a typical CdS photocell detect a 780nm IR laser?

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Speed of response is a measure of the speed at which a photocell responds to a change from light-to-dark or from dark-to-light. The rise time is defined as the time necessary for the light ...

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While silicon photodiodes have lower visible-light sensitivity than either cadmium-sulphide or cadmium-selenide photocells, they respond faster to changes in light ...

Selecting a Photocell Specifying the best photoconductive cell for your application requires an understanding of its principles of operation. This section reviews some fundamentals of photocell technology to help you get the best blend of parameters for your application. When selecting a photocell the design engineer must ask two basic ...

VIDEO ANSWER: The time  $t_{SE}$  has to be found for two conditions. This is the time in the world that the clock moved from A to B because we have the same time as B. The time between the light powers comes to us from B. After reaching the clock at B

Photocell changes light signals into electrical signals. Light energy can be infrared or ultraviolet radiations. ... The base of transistor (or gate in FET) responds to light and controls the flow of current between the leads. It can resemble as ...

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photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye. OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc. STANDARDS: Meets ANSI/UL773A. HOUSING: Heavy Duty die cast zinc housing and base.

Photocells are used in a wide range of applications, including automatic lighting controls, burglar alarms, and remote controls. To ensure that a photocell is functioning correctly, it is essential to test it. Testing a photocell involves measuring its resistance and verifying that it responds appropriately to changes in light.

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