Photo Electric Cell:

Albert Einstein (1879–1955), showed that a light beam, shining on something like a piece of metal, could be thought of as a train of energetic particles called **photons**. The photons passed their energy in fixed quantities to atoms inside the metal, knocking some of their electrons out of them, so producing an electric current.

A pocket calculator uses a type of photoelectric cell known as photovoltaic: when light falls on it, it produces enough voltage to power the display and the electronics inside.

Photoelectric cell, also called **Electric Eye, Photocell**, or **Phototube**, an electron tube with a photosensitive cathode that emits electrons when illuminated and an anode for collecting the emitted electrons. Various cathode materials are sensitive to specific spectral regions, such as ultraviolet, infrared, or visible light. The voltage between the anode and cathode causes no current in darkness because no electrons are emitted, but illumination excites electrons that are attracted to the anode, producing current proportional to the intensity of the illumination. These tubes are used in control systems, where interrupting a beam of light opens a circuit, actuating a relay that, in turn, supplies power to a mechanism that brings about the desired operation, such as the opening of a door. The tubes are also used in photometry and in spectroscopy.