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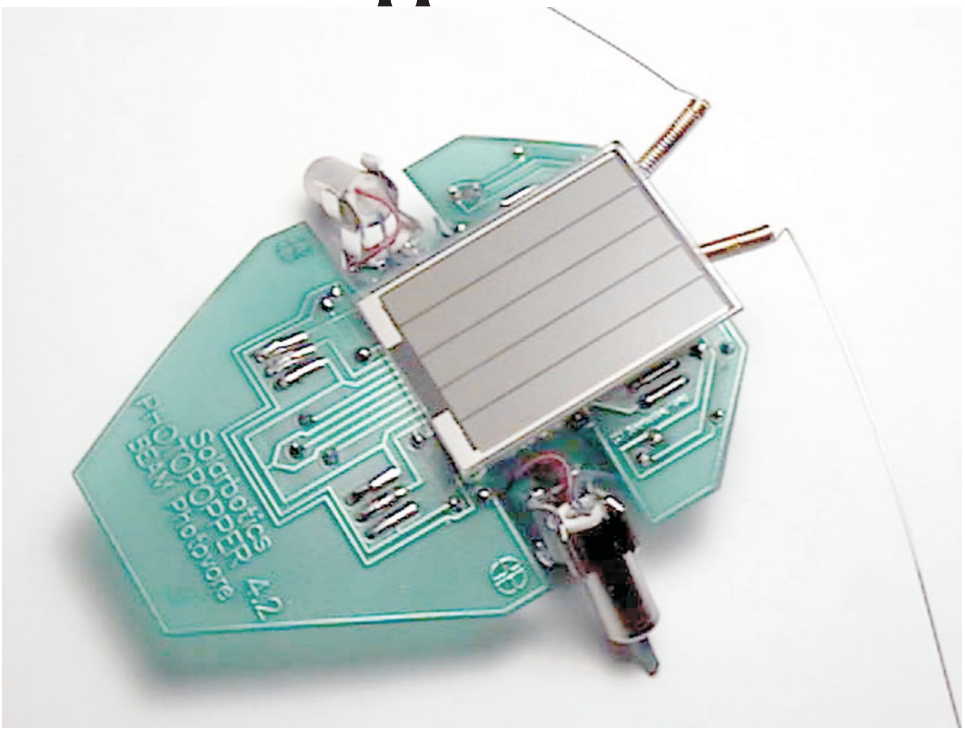
PhotoPopper Photovore



A solar powered robot by its very nature should hunt out sources of energy to keep it going, otherwise it dies under the first shadow it encounters. This robot hunts light, thus the name Photovore, or Light-Eater.

This is a very simple robot, consisting of only four transistors, two optical sensors and two voltage detectors. Although it cannot backup out of a corner, it does have the ability to seek light and avoid obstacles with its tactile sensors. Not bad for only much less computational power than your average wrist-watch!

Like most of the solar-powered BEAM robots, this design uses a 'Solarengine'. A solarengine allows the relatively weak power output of a small solar power systems much larger than it should be able to. It does this by storing up the power in a capacitor (like a miniature battery, except much more efficient) that is monitored by a voltage detector circuit. When there is enough voltage stored up, the circuit trips and dumps all the power to the circuitry that drives the robot. With a PhotoPopper, there are two such circuits fighting over the power stored in the single storage capacitor. The amount of light falling on the optical sensors determines which motor fires to bring it closer to the light.

Visit www.solarbotics.com for more information about this robot.