The BPW34 is a tiny, general purpose PIN photodiode. This photodiode has a ton of uses, one of which is to use it as a mini solar cell to power your project. The cell is sensitive to a wide range of light wavelengths (430-1100nm), so it should produce power in a number of different settings. The rated open circuit voltage is 350mV (900nm, 1mW/cm² light source), and short circuit current is 47μA.

These are fun (of course)! We shined a 940nm infrared LED on one of them and it produced about 0.5VDC open circuit voltage. Stringing four together in series, we were able to turn an LED on with them. They'll also produce a small voltage, ~250mV, in a brightly, fluorescent-lit room.

Most light-detection circuits will use a CdS photoresistor like SEN-09088. Unfortunately, they are somewhat slow to react (a few ms). Find for detecting big shadows, but too slow to measure fast-blinking LEDs accurately. Photodiodes like this product react much more quickly (in the hundreds of ns), so you can get very quick measurements if you have a high-speed ADC (like the MCP3002 (COM-08636 at SparkFun)).

Customer Reviews

5 out of 5
Based on 1 ratings:

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Great high-speed light detector

about 2 years ago by Member #622105 [promoted to member]

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