

Re: Shaker LED flashlight

Source: <http://sci.tech--archive.net/Archive/sci.electronics.design/2008-01/msg01369.html>

- *From:* linnix <me@xxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 9 Jan 2008 15:40:18 -0800 (PST)
-

On Jan 9, 1:08 pm, mrdarr...@xxxxxxxxxx wrote:

On Jan 9, 10:16 am, "amdx" <a...@xxxxxxxxxxxxx> wrote:

Just for fun and as a reinforcement of the electricity books my son has been reading. I bought a shaker flashlight. (magnetic flux cutting across wire moving electrons, the electrons then stored on plates of a capacitor) The flashlight has a magnet that slides back and forth through a coil. The flashlight cost \$1.00. After I opened the package I noted a small screw rattling inside the light, so I took it apart and I found two cr2032 lithium batteries in series powering the LED. The coil is connected to a fullwave bridge and the unit has a .22f capacitor. There is a 10 ohm resistor in series with the LED. If I remove the batteries and short across the holder the LED will not light, no matter how much I shake it. I just found the batteries in there to be a disappointment. :-)
Mike

Well, the good news is, you now know of a cheap source of CR2032 batteries (which can be expensive elsewhere)...

Michael

Actually, there are cheaper sources. I got some of them for a penny each, after throwing away the ASIC and 100 SMD LEDs. I need a few thousands of them, but it wouldn't justify the gas cost. CR2032s are approximately 25 cents each in volume.