

# Re: Using piezoelectric to power a laser diode?

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.basics/2006-01/msg01338.html>

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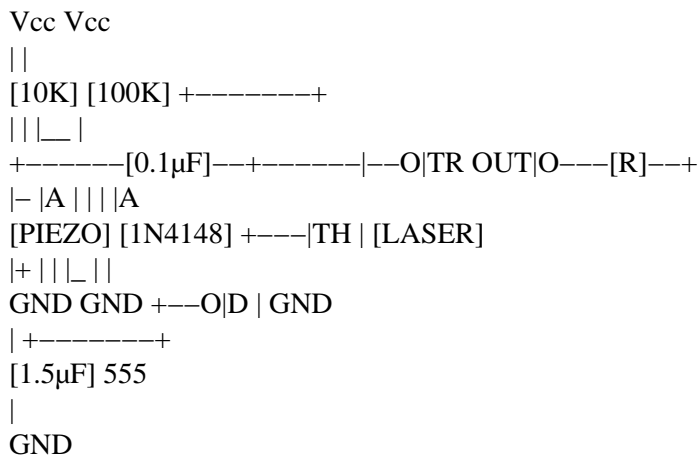
- *From:* John Fields <jfields@xxxxxxxxxxxxxxxxxxxxxxxx>
  - *Date:* Fri, 27 Jan 2006 07:05:46 -0600
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On 26 Jan 2006 18:45:18 -0800, bobrich@xxxxxxxx wrote:

>Hi,  
>  
>I'm a complete novice/noob to electronics.  
>  
>I have a little project i'm working on, and would like to use a  
>piezoelectric power source to run a small visible laser diode for a  
>short duration (20-200ms). Does this seem feasible? The biggest  
>problem, from what i can tell, is the output voltage of the piezo is  
>likely to be much greater than the 2-3V i need to run the diode. The  
>other problem i'm having is actually finding suppliers of piezo devices  
>that would be suitable for this...all i can find are accelerometers and  
>strain gauges.  
>  
>Any thoughts? The energy source will be a sharp blow from a small  
>spring-loaded lever.

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That won't work.

Try this:



1.5µF will get you a 200ms pulse out of the laser and 0.15µF will get you 20ms.

## Re: Using piezoelectric to power a laser diode?

Or this:

```
+-----+
+-----|~ +|-----+-----+
||| |+ |A
[PIEZO] || [C] [LASER]
||||
+-----|~ -|-----+-----+
+-----+
FWB
```

You'll have to determine the value of C experimentally. Start with something like 10 $\mu$ F and work down until the laser flashes.

It worked for me with a plain old red LED and the piezo element from a barbecue lighter, which you might be able to adapt for your use.

—  
John Fields  
Professional Circuit Designer  
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- **Follow-Ups:**

- ◆ **[Re: Using piezoelectric to power a laser diode?](#)**  
◇ From: John Fields

- **References:**

- ◆ **[Using piezoelectric to power a laser diode?](#)**  
◇ From: bobrich

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