

luxeon led dimmer circuit

Source: <http://sci.tech-archive.net/Archive/sci.electronics.basics/2005-10/msg00051.html>

- *From:* andy <news4@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 02 Oct 2005 19:10:09 +0100
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I've built the following circuit on breadboard as a dimmer circuit for 3 luxeon III Star ultrabright LEDs:

<http://www.niftybits.ukfsn.org/electronics/luxeon-dimmer.png>

any comments welcome. It does work at the moment, but when the battery is low, the maximum current drops from 0.9 A to 0.7 A, and the op-amp swings near to the top rail. The one thing I'm thinking of changing before I solder it up is to change the 1 ohm sense resistor for a lower value (maybe 0.5 ohm) so that the transistor has a bit more headroom to work with, which should cure this I think.

The LEDs are /very/ bright by the way – 3 of them are enough to light a small room well enough to read by. The light is a bit unkind on the eyes, but not too bad. 3 at full current are about equivalent to an 11 Watt energy saving fluorescent light bulb, which puts them in roughly the same bracket as far as efficiency goes.

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<http://www.niftybits.ukfsn.org/>

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- Previous by thread: ***Datalogger and Mixed Analog and Digital Inputs***
- Next by thread: ***Re: luxeon led dimmer circuit***
- Index(es):
 - ◆ ***Date***
 - ◆ ***Thread***