

Re: Most Efficient Light Source??

Source: <http://sci.tech--archive.net/Archive/sci.energy/2005-11/msg00089.html>

- *From:* "Fritz Schlunder" <me@xxxxxxxxxxxx>
 - *Date:* Fri, 18 Nov 2005 19:22:30 -0700
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"Fritz Schlunder" <me@xxxxxxxxxxxx> wrote in message
[news:437e842e\\$1_1@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:437e842e$1_1@xxxxxxxxxxxxxxxxxxxxxxxx)

- > This is most likely bogus, although at least a physical possibility. Any
- > advancements to 130 lumens/watt will most likely be produced by well
- > established white LED/dice manufacturers such as Cree or Nichia, not some
- > single "professor" goofing around. Additionally it is unlikely a 130
- > lumen/watt white LED would be based around a purple LED die since purple
- > photons have more energy than blue photons, but the phosphors waste any
- > excess photon energy when downconverting the short wavelength light into
- > longer wavelengths.

Hmm... I just let myself fall into a trap I would like others to avoid. To the extent of our current technology there is no such thing as a "purple" LED that I am aware of. Purple and violet are two colors that often get confused and mixed up. Purple isn't really a single color, it a color produced by mixing some red and blue light. You can't exactly assign a specific wavelength to the color purple, since it is actually a mix of wavelengths, much like white light. Violet on the other hand is a real single color, and violet LEDs most certainly do exist. Violet is shorter in wavelength than blue light, so something like 400 nanometers would appear as violet (although it might get marketed as an ultraviolet LED or near ultraviolet LED).

Anyway, this further undermines the credibility of the article since technically no true "purple" LED using a single LED die exists. Violet LEDs certainly exist, and that is probably what they meant to say, but if they really knew what they were talking about and had actually achieved what they claim, it seems to me they wouldn't likely have made such an error. Of course, many people simply use the words purple and violet interchangeably when they technically shouldn't, and that in and of itself doesn't exclude competence or achievement. Nevertheless I would consider the article with a strong dose of skepticism.

- **References:**

- ◆ **Most Efficient Light Source??**

- ◆ *From:* manofsan@xxxxxxxxxx

- ◆ **Re: Most Efficient Light Source??**

- ◆ *From:* Fritz Schlunder

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