

Re: One Giant Monolithic LED

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- *From:* Spehro Pefhany <speff@interlogDOT_YOUKNOWWHAT>
 - *Date:* Fri, 29 Dec 2006 13:37:43 -0500
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On Fri, 29 Dec 2006 17:11:36 GMT, myrealaddress@xxxxxxxxxx (D from BC) wrote:

LED's are getting very bright but they're still point light sources.

An array of LED's on a PCB has to be created to backlight a LCD computer monitor.

Why the individual packaging? Can a big 2ft x 4ft slab of "die material" containing hundreds of packed in LED's be created?

Is it a semiconductor manufacturing problem or just physically not possible?

I'll guess at answers:

- 1) Won't fit in the machines
- 2) It's custom and there's little demand
- 3) It would be too delicate
- 4) Just not possible due to construction of the LED
- 5) Heat problem
- 6) The word of the day is "_____"
- 7) You waste of food, stop making internet pollution and use Google.
- 8) It's a secret :)

D

LED dies are typically less than 10 mils square. The wafers are probably 6" diameter or something like that (much smaller than the 300mm wafers used for silicon semiconductors). Calculate the cost (assuming, say, 5 cents per die for a decent LED) of a 24 x 36" piece, even if it could be made. And the current it would draw at full bightness (say 20mA per 8mils x 8 mils). And the power at $V_f=3V$.

I get somewere around the cost of a decent house, and enough power for a fair sized village.

Re: One Giant Monolithic LED

LED backlights are made with automated machines that place the dies and wire bond them to a cheap backing.

Best regards,
Spehro Pefhany

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"it's the network..." "The Journey is the reward"

speff@xxxxxxxxxxxxx Info for manufacturers: <http://www.trexon.com>

Embedded software/hardware/analog Info for designers: <http://www.speff.com>

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