

Tech review: The future is bright for LED bulbs [?] and your wallet

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Not too long ago, I wrote a review of several 60 watt-equivalent bulbs that use light-emitting diodes. I touched on a few ideas about the future of light bulbs that prompted some conversation both online and in the office.

With the phase-out of traditional incandescent bulbs, the focus is shifting to compact fluorescents and LEDs.

CFLs have been around for a few years, and they're getting pretty cheap. But they have their drawbacks, including warm-up time, proper disposal and not being dimmable.

LEDs have technology and innovation on their side. I'm convinced that LED bulbs are going to be next big thing in consumer lighting.

I talked with Mike Watson, the vice president of product strategy for Cree, maker of the best-selling LED bulbs in America, which are available at Home Depot stores. I asked him to speak about the present and future of lighting choices for consumers.

"The first thing we thought about was how to get consumers to care about light bulbs for the first time in over 100 years and how to associate that care with a product they believe is better than the choices they had previously," Watson said.

He said Cree thought about what consumers needed first. It wasn't a

fancy LED kit with Internet connectivity and color-changing bulbs - it was light bulbs that were simple and would work in the lamps everyone already had at home.

"There are about 5 billion lamps in households today that we don't want to ask consumers to change, in addition to the light source," he said.

"Our fundamental philosophy is to adapt to what exists today and provide a light source that works, as it should, in those 5 billion sockets and provide benefits consumers have never had before in massive energy cost savings, a lifetime of no maintenance, and when you get a critical mass of those consumers that understand the value, then you can start introducing new value like color-changing and eventually control and communications."

I admit I didn't think LEDs were something I wanted to invest in before I did some calculating of the cost of the bulb plus the cost of electricity over the lifetime of use.

"LEDs provide awesome light and are very cost-effective when you look at all the costs," Watson said. "We have to change (the consumer's) mindset from light bulbs being a disposable commodity to a transferable asset - something you could unscrew and take with you when you move."

Here's the cost breakdown for one 60-watt bulb:

With three hours of use per day, Cree 800-lumen LED bulbs (\$10 from Home Depot) should last more than 22 years, and cost only \$1.14 per year to operate.

Doing the math, one LED bulb will cost about \$35 to buy and operate for 22 years.

Compare that with a 60-watt [incandescent bulb](#) (\$2.60 from Amazon) that costs \$7.23 per year to keep lit. It has a lifespan of just under 11 months.

Doing the math for electricity plus the cost of replacing 24 bulbs, using an incandescent in the same lamp will cost \$221 over those same 22 years.

That's a \$186 savings per bulb.

How many bulbs do you have in your house?

I can count 30 bulbs in my house, and that doesn't include flood lights outside. I bet most of you have at least that many bulbs.

I realize dropping \$300 or more on LED bulbs isn't high up on anyone's list of fun things to do, but the quicker you start changing out your bulbs, the faster your savings will begin.

Cree produces bulbs with an A19 socket - what you'd call a normal [light bulb](#) - and BR bulbs for recessed lighting cans.

But what about bulbs that don't have a normal A19 socket? What about three-way bulbs, chandelier bulbs and flood lights?

Watson couldn't speak on which products are in development, but he did say, "Our roadmap is obviously a broader set of products. Three-way, spots, globes and candleabras are the next logical applications."

He said their target is a 5 percent adoption rate among consumers. It's at 1 percent now.

Watson mentioned a future where Cree could produce bulbs that include

technologies to change colors or are controlled by smartphones.

He also mentioned the term "daylight harvesting," which means a bulb that can measure ambient light in a room and only provide the amount of fill-in light needed, changing brightness as conditions change throughout the day.

These sensors could also measure motion and automatically turn the bulb on or off as you enter or leave a space.

These types of technologies would make the bulbs more of a home automation feature, like a Nest thermostat.

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