

Review: New light bulbs offer alternative to LEDs and CFLs

September 4 2015, by Troy Wolverton, San Jose Mercury News

For consumers who are still bemoaning the phaseout of incandescent light bulbs, hate the harsh CFLs and can't figure out LEDs, another option may be on the horizon - a new kind of bulb is slated to hit store shelves this fall.

Like LEDs and CFLs, the new bulbs, developed by a startup company called Finally Light Bulb, are much more efficient than the old power-sucking incandescent ones and are reputed to last far longer. But unlike much of the competition, they look almost identical to the old bulbs and promise to emit <u>light</u> of the same color.

"We've created a bulb that has everything you love about incandescents, especially the warm, comfortable light quality, just without the energy waste," said John Goscha, founder and CEO of Finally.

The new bulbs come amid a huge shift in the lighting market. Laws in the United States, Europe and elsewhere that seek to curtail the energy used by light bulbs have imposed new standards that traditional incandescent bulbs generally can't meet. That's helped to create a market for alternative lighting technologies, including CFLs and LEDs.

Unlike those kinds of bulbs, Finally's generate light via induction, the principle through which electrical currents can be generated via magnetic fields. Induction is often used to recharge electronic devices such as Apple Watches and is used in some electric motors.



In Finally's light bulbs, an electric charge flows through copper coils inside its bulb, creating an electromagnetic field that interacts with a gas inside the bulb to create ultraviolet light. When those photons pass through the bulb's phosphor-coated glass shell, they're converted into warm visible light.

Induction lights have been actually around for decades, but they've typically been large bulbs that are used for illuminating things like stadiums, theaters or streets. Finally, which is based near Boston, reworked the technology so that it could be sold to consumers.

Finally started selling its bulbs this spring through its website and recently announced that Amazon-owned Quidsi would be selling them through its Soap.com, Diapers.com and Casa.com online stores. Goscha said the company is working on deals with "some well-known retailers" - he wouldn't say which ones - to have its bulbs on their shelves later this year.

Right now, the only bulb Finally sells is a standard-shape 60-watt equivalent. It recently started taking pre-orders on a similarly shaped 100-watt equivalent bulb that it plans to start shipping by the end of the year. The bulbs aren't dimmable, but Finally is developing bulbs that will be, Goscha said. Many consumers who are looking to replace their old incandescent bulbs don't understand their options and often find a confusing array of choices on retail shelves, said Jim Dakin, an independent lighting industry consultant who previously worked with some of the engineers that developed Finally's technology. That created an opportunity for Finally to market its bulbs as an easy and attractive alternative.

"That's kind of a sweet spot," Dakin said.

Many lighting industry experts expect LED bulbs to soon dominate the



market. Last year, they accounted for about 5 percent of all light bulb sales globally, according to IHS, but the research firm expects that portion to jump to 10 percent this year.

However, consumers' negative impressions using LED bulbs could open up a market for Finally's products. Early versions of such bulbs gave off a bluish light that many American consumers find unpleasant and some made annoying buzzing noises. They were expensive, frequently came in odd shapes, weren't dimmable or terribly reliable, and used about the same amount of power as comparable CFL bulbs.

Finally "may build a niche," said Dean Freeman, a lighting industry analyst at research firm Gartner. "You may have people who say they want something more like <u>incandescent light bulb</u> than LEDs."

But Freeman and other analysts are skeptical that Finally's bulbs will find mass appeal. In part, that's because the lighting market is dominated by giant companies like Philips, GE and Osram Sylvania whose bulbs hog retail shelves, making it difficult for smaller companies to compete.

"You have people who have been in the lighting business since Edison invented the <u>light bulb</u>," said Freeman. "They know how to market."

Another big challenge Finally faces is that LED lighting technology is advancing so rapidly. Manufacturers have addressed nearly all of the early problems of LED bulbs.

Today, consumers can find 60-watt equivalent LED light bulbs from major manufacturers that come in the same shape as the old incandescent bulbs and produce the same light color for less than half the \$10 cost of Finally's comparable bulbs. And for about the same price - or even less - as Finally's bulbs, consumers can find LED ones that are dimmable, last 67 percent longer, and use less than 10 watts of power, or



about 4 watts less than Finally's do.

And because LEDs are based on semiconductor technologies, they're likely to improve over time, just as computer chips have, analysts said. Induction technology doesn't hold the same promise, they said.

"Three years ago, this would have been a big deal," said Philip Smallwood, an LED and lighting analyst at research firm Strategies Unlimited. "They're a little late to the party."

©2015 San Jose Mercury News Distributed by Tribune Content Agency, LLC.

Citation: Review: New light bulbs offer alternative to LEDs and CFLs (2015, September 4) retrieved 18 May 2024 from https://phys.org/news/2015-09-bulbs-alternative-cfls.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.