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Light Bulbs Are So Over — Bridgelux Brings LED Lights Down to \$20

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By Camille Ricketts

Light-emitting diodes (LEDs) may be backlighting your television and mobile phone screens, but they have yet to come to lamps and lighting systems for homes and businesses. Now, new technology is whittling down costs, making them a more practical choice. The latest advancement comes from LED maker Bridgelux, offering a new LED light for just \$20.



This is a big drop from the previous price point of about \$50, according to Bridgelux CEO Bill Watkins. That said, it's still much higher than prices for incandescent and compact fluorescent bulbs, which range from \$2 to \$10.

That's why the company plans to go after the retail and commercial markets first. Because businesses keep closer tabs on energy costs and savings than homeowners, they are more likely to take note of how much energy and money they stand to save by installing super efficient LEDs. Watkins said the energy savings alone pay for the lights in about two years.

"We're really trying to enable our customers to embrace LEDs," said Jason Posselt, vice president of marketing. "It's all a question of how to hit a cost point that gets people to transfer over." The company sees itself as competing more with traditional lighting makers than other LED companies like Cree or Luminus Devices.

Price isn't the only factor that makes the new light, called the Helieon, special. It also comes paired with a special socket, made by socket-specialist Molex, so that it can be easily removed from fixtures and replaced, just like a regular light bulb.

This is another leap ahead for the LED industry, which has been churning out fixtures with permanent LEDs built in. In those models, when you want to change one of the lights — because its burnt out or you want a different color or intensity — you have to tear out the whole fixture.

With LEDs rapidly becoming more efficient every day, being able to easily swap individual units out is increasingly vital.

"New arrays in February were 30 to 60 more efficient and 20 to 30 percent lower in cost," Posselt said. "When the price hits \$10, it will be an obvious buy for everybody. We've given them the flexibility to evolve as the technology evolves."

The basic Helieon emits the same amount of light as a 60-watt incandescent bulb, but uses a tiny amount of energy to run it by comparison. It is also available in a variety of brightnesses, beam shapes (more focused or diffused), and colors — a cool office white or a warmer living room white, for example.

The light-socket pairing also comes in different sizes. Right now, the diameter of the socket is 80 millimeters, but a 50-millimeter version is forthcoming, as well as larger editions, well-suited to big warehouses or outdoor municipal illumination like street lights.

But you're not going to see the light on Home Depot shelves just yet. Instead, in May, the company will start marketing its new light to luminaire makers — the architects, contractors and manufacturers that actually build lighting systems. Once it catches on among the people who install lighting in stores and offices, the company may start selling direct, Watkins said.

Bridgelux already has a roster of 200 luminaire maker clients but is actively looking for more.

LEDs have been in the news recently due to a shortage in the materials used to make them. Apparently, television and other screen makers have been gobbling them up for backlighting purposes. While Watkins admits the market is tighter than it has been, he says Bridgelux isn't concerned about the shortage's impact on its operations.

“Not a lot of these companies are using the LEDs used for bright lights. We're the only company that's 100 percent focused on general lighting applications,” he said. “So we don't really care about TVs or Christmas lights.”

Rather than being concerned about the future, the company is looking ahead to a time when it can introduce more advanced functionality to its lighting systems. In the past, Watkins has said it would be possible to automate LEDs to turn on or off at certain times, or to track when people are present or not, to even further reduce energy costs. But this isn't one of Bridgelux's top goals for now.

“We are breaking through barriers: the first was getting a working light, now it's about cost — after that we can start adding functionality like lighting controls and appearances,” Watkins said. “But the market isn't there yet. The idea of having replaceable [LED] lights is pretty revolutionary.”

Bridgelux also recently closed a funding round of \$34.3 million, according to a filing with the SEC. Watkins says the new money came from existing investors, including DCM, Chrysalix Energy, VantagePoint Venture Partners and El Dorado Ventures, in addition to a few new undisclosed firms. The round will be used to grow business for the Helieon while continuing R&D to make LEDs more efficient.

The Helieon and Molex socket are currently being manufactured in the U.S., but these operations will probably be moved to China, Mexico or Malaysia.

Based in Livermore, Calif., Bridgelux has 138 employees.