

Centennial Bulb glows strong at age 124, a survivor in turbulent times

What was a novelty in 1901 has become a sentinel of stability amid the uncertainty at home and abroad.

Yesterday at 6:00 a.m. EDT



By [Reis Thebault](#)

LIVERMORE, Calif. — Follow a leafy suburban street past churches and chain pizzerias. Walk into a worn-down firehouse and look up: There, 15 feet above, hangs a priceless artifact. A record breaker. A sentinel from the golden age of American invention. It is a few inches long, is shaped like a pear and emits a soft glow.

It is a lightbulb. But not just any lightbulb.

This is the Centennial Bulb, so named in 2001 when it marked its 100th consecutive year of illumination. Fourteen years later, it sailed past 1 million hours of service. Since then, it's added 80,000 more. Next year would be its 125th birthday.

The bulb has been alight longer than any human has been alive. It has outlasted at least 20 U.S. presidents. The union was just 45 states large when it was first plugged in. If the matter had been on the ballot, most women would not have been legally allowed to vote on it. It was burning before the Wright Brothers' maiden voyage and before the very first pitch of the very first World Series. Mount Rushmore was faceless, penicillin was nameless.

If this bulb could talk, it would tell of world wars and revolutions, of tragic loss and heroic triumph. But of course, it cannot talk. Instead, it has people to talk for it. Foremost among them is Tom Bramell, keeper of the bulb.

"It's not just a lightbulb," said Bramell, who served in the Livermore Fire Department for 30 years, retiring as deputy chief in 2003. "It represents the legacy, the history of a city. That thing is silently watching over us 24/7."

There are some 8 billion lightbulbs in use across this vast country, according to data from the U.S. Energy Department. Americans buy more than a billion new bulbs each year. It's difficult to deduce how many are thrown away annually, but industry estimates suggest the number is in the hundreds of millions, and perhaps more.

In this age of impermanence — this era of endless updates and planned obsolescence — a plucky, still-burning bulb, on the verge of celebrating its quasiquicentennial, offers a reminder of a time when technology was unabashedly built to last.

For Bramell, a hobbyist and folksy philosopher, its softly radiating presence is also a source of reassurance and hope, an example of survival even in the most turbulent of times.

“Generations will come and go, and civilizations are going to change,” Bramell said. “This lightbulb is a testament to that fact. It’s survived this long, and life goes on.”

History’s best bargain

The bulb’s story begins in a different America.

Near the end of the 19th century, when the Rust Belt still shimmered with industrial optimism, businessmen in a central Ohio city partnered with a French inventor to form the Shelby Electric Company.

The company promised a product that would last 30 percent longer than its competitors, said Bramell, who compiled his research into a book about the bulb. At the time, other leading bulbs had a lifespan of about 50 days.

Shelby Electric’s secret lay in its filaments — the thin wire in the center of an incandescent bulb, which glows when heated and rattles when burned out. The company’s exact method of producing the filaments remains unknown, but scientists believe they were made of carbon about the width of a human hair.

At 40 cents, the bulb may be history’s best bargain.

Livermore in 1901 was a quiet town of no more than 1,500, nestled in a valley some 35 miles east of San Francisco. Electricity was still a novelty, so when the owner of Livermore’s local utility presented a 60-watt Shelby lightbulb to the volunteer fire department, it qualified as a big event.

The bulb became a trusty night light for the “Livermore Fire Boys” with their horse-pulled hose carts. It dimmed only when the firehouse relocated or underwent renovation, and a couple of times during brief power outages, but otherwise it remained lit around-the-clock.

At some point, the bulb became a good-luck charm, hanging over the trucks on its original cord. The firemen — and they were all men until 1995 — took to swatting it on their way out to calls.

As the decades passed, few people gave a thought to the bulb’s origin or longevity. Until 1972. That’s when Mike Dunstan, an 18-year-old cub reporter with the Livermore Herald and News, got a tip: Word was, the fire chief said, that bulb in the middle of the station might be really, *really* old.

Dunstan dug in. He tracked down department old-timers and the daughter of the bulb's original donor, who recalled her father's gift. The eventual front-page article carried a banner headline eight columns wide: "Light bulb may be earth's oldest."

"I was born and raised in Livermore," said Dunstan, now retired. "It was a matter of local pride. It was novel, yet it had a real human charm."

By the standards of that pre-internet age, Dunstan's story went viral. Charles Kuralt of CBS News featured it in his popular "On The Road" segment. Tour buses began arriving outside the firehouse. "Ripley's Believe It or Not!" included the bulb in its compendium of the wild and weird. And, after weighing the evidence, Guinness Book of Records gave the bulb its official imprimatur.

The good luck taps stopped. "Now it's never touched," Bramell said. "We don't even dust it."

Its legend grew. For its 100th, President George W. Bush sent the bulb a birthday card on White House letterhead, writing that it was "an enduring symbol of the American spirit of invention."

Still, there were unknowns. Enter Debora Katz, who was a physics professor at the U.S. Naval Academy in 2006 when she learned about the bulb from an episode of "MythBusters" her daughter was watching.

"Physics," she said, "is about asking the big questions and seeing if you can answer them."

For example: *How in the heck is this lightbulb still burning?*

She reached out to Bramell, and with her students began running tests on a sister Shelby bulb from the same era, which the Livermore crew had bought on eBay and mailed to her. Katz found that the bulb's carbon filament — unlike those made of tungsten that came along shortly after — became a better conductor of electricity the hotter it got. This may have made it more resilient.

But the Shelby bulbs also glowed at a lower wattage than intended, a phenomenon Katz thinks may have been accidental but key to the Livermore light's endurance.

"I can keep running longer if you let me slow down," she said. "If you let me walk, I can go even longer."

It also helps, Katz said, that the bulb has barely been turned off, preventing the spikes of power that take a toll on hardware. Katz wound up including the bulb in a chapter of her physics textbook, hoping it might inspire a new generation of scientists.

"It speaks to the possibility for us," Katz said. "What we could build, what we could do. It's not quite the moon landing, but it gets you thinking in those directions."

'Another 100 years'

Before John Marchand became a chemist, and before he was elected mayor of Livermore, he was awed by stories of the ever-burning bulb. Now he's in charge of it.

But with that power comes immense responsibility. Marchand lives with the low-grade fear that the bulb will go out on his watch.

“We’re very nervous,” he said, laughing.

A big test looms: The firehouse where the bulb has hung since 1976 needs renovating, and the bulb will probably be unplugged, at least briefly. It’ll be a jittery moment. The last time the bulb changed locations, it didn’t immediately light back up, sending gasps through the crowd that had assembled to watch. (The city electrician, on hand for the occasion, turned the switch on the side of its socket and the glow returned.)

Marchand said he has “very smart people” studying how to keep the bulb safe. He’s taking great care, he said, because he knows how special it is. Of all Livermore’s fun facts — only city with two national laboratories, home to the fastest-ever supercomputer, namesake of an element on the periodic table (Livermorium, element 116) — hosting the world’s longest-burning lightbulb is most meaningful, especially these days, he said.

Deep division at home and deadly conflict abroad call for some sort of beacon, Marchand said, so why not a literal one?

“In dark times, people are always looking for something to provide light,” he said. “We’re looking for inspiration, and that’s what the lightbulb is all about.”

If Bramell has learned anything in his half-century with the bulb, it’s to never underestimate it. He thought it’d burn out long ago. But he’s watched the bulb outlive a backup generator and three cameras set up to live-stream its lumens. No LED bulb — an energy-efficient alternative that has replaced incandescent as the country’s most common — has come close.

Now when people ask how much longer it’ll burn, Bramell is sure of one thing only.

“I think it’s going to outlive me, no question about it,” the 76-year-old said with a smile. “I think it could be around for another 100 years.”

What readers are saying

The Centennial Bulb is celebrated as a powerful symbol of resilience and endurance, representing a time when products were built to last. Many comments highlight the contrast between the bulb's longevity and modern practices of planned obsolescence, where products are... [Show more](#)

This summary is AI-generated. AI can make mistakes and this summary is not a replacement for reading the comments.