



The Great Debate: Incandescent vs. LED

Actually, the debate is over. LEDs win in every measure except initial price: A string of LEDs costs about twice as much as same-sized incandescent bulbs. But because LEDs are so long-lasting, the price differential is erased after two to three years of use.

"Last year for the first time, sales of LEDs surpassed incandescents," says Mike Streb, of online retailer Christmas Lights Etc.

Energy efficiency. LEDs use about 10 percent of the electricity that incandescent bulbs do. An incandescent bulb must heat up its filament to produce light, and about 90 percent of the energy it uses goes to producing heat. LED technology sips energy and produces very little heat, which in turn reduces the risk of fire.

Many types of LED holiday lights meet Energy Star guidelines set by the Environmental Protection Agency.

Longevity. LEDs last two to three times longer than incandescent bulbs. Plus, LED bulbs typically are made of lightweight plastic and less likely to break than glass incandescent bulbs.

Brightness. Incandescents hold the edge, but LED light strings usually feature more bulbs per string. Call this one even.

Bulbology

Like shoes and cologne, Christmas light bulbs have fashion swings. Although mini lights have been by far the most popular during the past decade, larger, more "old-fashioned" bulbs are making a comeback. All styles are available as incandescent and LEDs. Here's what you need to know to be a true bulb fashionista:

Mini lights look like tiny candles with pointed tips. They are about 1/4 inch in diameter and 5/8 inch tall.

C6 bulbs are smallish strawberry-shaped lights that are often thought of as the traditional Christmas tree light. Bulbs are 3/4 inch in diameter and 1 1/8 inches tall.

C7 bulbs have a similar shape as C6s but are slightly larger and rounder. They are 1 inch in diameter and 1-1/2 inches tall.

C9 bulbs are the big brothers of the holiday bulb family, measuring 1-1/4 inches in diameter and 2 1/2 inches tall. They are frequently used in outdoor applications.

G series bulbs are globular and come in a variety of sizes. They're found in everything from table lamps to auto taillights. To figure the diameter of a G series Christmas light bulb, take the number that appears after the G, divide it by 8, then round to the nearest whole number. For example, a G15 is about 2 inches in diameter.

Clear, frosted and patterned glass options add pizzazz to the quality of the light each bulb emits.

Rope lights are strings of mini lights encased in flexible plastic; the entire tube looks like it's lit up. Rope lights are great for wrapping posts and making garlands of colored light.

Specialty clips are designed to add lights around windows and to grab onto brick surfaces.

Choose lighting clips based on the size of the bulbs in your lighting strings and to what building part you'll attach the strings. Clips grab the light sockets, so you can position the bulbs upright, hanging down or horizontally. A pack of 50 all-purpose clips is about \$6.

Keys to successful lighting strings:

Map out your scheme carefully before installation.

Use only light strings and extension cords approved for outdoor use.

Strings are designed to plug into each other to create long runs, but never use more than three strings on any one run.

Plug light strings into same-length strings. Don't mix and match strings of different lengths — the wires are rated for different amperages.

Measure the distance carefully and write everything down so you'll only have to make one trip to the store.

If you need a measurement for spiraling up a post or tree trunk, wrap a string around it, then lay the string flat to measure the length you'll need.





Always Choose Waterproof Lights

There is a variety of lights to choose from. First and foremost, always use waterproof or water-resistant lights with a tag marked underwriters lab (UL). This means the lights meet national industry standards with the American National Standards Institute. Also, when you're buying Christmas lights to use outside, make sure they are rated for outdoor use (just like your extension cords). Never use indoor Christmas lights outdoors.

Using Miniature Bulbs

Another option for outdoor lighting is the "miniature," which costs less and consumes less power than the classic outdoor light string. It can be used around the perimeter of your home, as well as in trees. In most cases, the miniature comes in strands of 50 or 100. The strings run in series, which means if one bulb or socket fails, you can lose a whole section.

The positive thing is that most miniature bulbs have a shunt inside of them to keep the entire string of lights lit if a bulb filament burns out. The key is to quickly replace the burned-out bulb. The shunt will allow the rest of the lights to remain lit, but it will increase the voltage in the rest of the bulbs, reducing their lifetime. With miniatures, you get what you pay for, so get a quality set of lights, and don't connect more than three sets of strings.

Using C7 or C9 Bulbs

For a more traditional holiday light, you will want to use a C7 or C9. These are the cone-shape lights you'll find most often in home improvement and convenience stores. The difference in these lights is size and wattage, with C9 being a little bigger and easier to see from a distance. Both come in frosted or clear color bulbs and are great for illuminating both your house and trees.

You can buy these in strands of 25 bulbs or larger strands of 100 bulbs. The 25-bulb strands can be connected together (daisy chained) up to a maximum of three strands; 100-bulb strands should be connected separately. Don't connect them together! The C7 and C9 strands use a standard screw-in candelabra base for easy bulb replacement. The strands are connected so if one bulb fails it only affects itself. Buying light strands with inner fuses is a great idea to prevent excess current on the strands.

Using Landscape Net Lighting

To light shrubs and bushes, net lighting is a great way to go. Net lighting is a mesh of interconnected mini LED lights that can drape right over your shrubs like a blanket. No more weaving light strings in and out of branches!

Using Shimmer Spheres

Shimmer spheres come in shaped and circular formations, like snowballs, or stars and striped formations. They are made up of many lights in different sizes. You can even find some that twinkle. Your house will be shining with holiday cheer for the whole block to enjoy.

