

Going Green: Choosing Christmas Lights

Every year, families put up Christmas lights to celebrate the festive season and to brighten up the days when the sun goes down earlier. You could find four main categories of Christmas lights decorations in your local store: Christmas tree lights, string lights, outdoor Christmas lights, and decorative Christmas lights. This article will describe these categories and the bulbs that they are made of and will inform about the best environmental choice you can make.

In the past, it was customary to decorate the Christmas tree with candles. In the early 20th century, electric lights became more popular and replaced candles; by the middle of that century, they were also used as various Christmas decorations. Today, three types of bulbs are commonly found in Christmas lights decorations: incandescent, compact fluorescent lights (CFL) and light-emitting diodes (LED). Here are short descriptions of these three types of bulbs covering their main advantages and disadvantages:

- Incandescent lights: By burning a metal filament, these lights give off a more natural light than the other types. Even though their production is more economical and easier, one of their biggest problems is their impact on the environment. These bulbs give off more thermal energy than any other type of bulb, and much of this energy is wasted in the environment as heat. They can also be a fire hazard. In addition, their bulbs do not have a long life, which means that their light sets are difficult to repair, and thus many of these bulbs end up in landfills. Recycling of incandescent lights can cause increased pollution, unless safer techniques are used to ensure that the various elements of these lights can be recycled safely and efficiently.
- LED lights: When an electric current flows through a microchip, illuminating the tiny light sources we call LED, the result is visible light in a yellow tint. While LED illumination is more efficient and lasts longer, they are also “directional” light sources. This means that you will need to use many LED bulbs in a large environment in order to illuminate it efficiently. Also, note that phosphor is used to cover some LEDs and give specific colors or familiar “white” light.
- CFL lights: Compact fluorescent lamps have an electric current passing through a



which contains argon and a small amount of mercury vapor. This generates invisible ultraviolet light which excites a fluorescent coating (called phosphor) inside the tube to emit visible light. The major advantage of these bulbs is that they use less electricity (about 70% less than incandescent bulbs) to produce and maintain visible light. One drawback is that CFL bulbs are sensitive to temperature extremes: if you use these bulbs outside the house, you should protect them from the elements before use. A negative aspect of the CFL light is that breakage of this bulb will lead to mercury pollution, which is very hazardous to health.

Christmas lights in public places and on public buildings are a popular part of the annual Christmas celebration. Generally, LED lights are used outdoors, as they work best with duration of use and in outdoor weather conditions.

In conclusion, the best choice between the three types of bulbs depends on your needs and the place of use. There are many Christmas lights buying tips and guides available to help you in your decision. It is important to read the manufacturer's instructions for use and safety. In areas where polluting sources provide energy, it is important for the environment to limit the use of Christmas lights. In any case, be mindful of usage to conserve energy.

Online links:

- Difference between Incandescent, CFL's and LED's, by Alan Rosinski, Greener Ideal guides, published on April 9th 2013,
<https://greenerideal.com/guides/0409-difference-between-incandescent-cfls-and-leds/>
- A buying guide to LED Christmas lights – amazing selection of multiple selection available, The Christmas light emporium, Copyright in 2021,
<https://thechristmaslightemporium.com/pages/a-buying-guide-to-led-christmas-lights>
- Christmas lights, Indoor and Outdoor Range, Homebase, copyright in 2021,
<https://www.homebase.co.uk/christmas/christmas-lights.list>
- Learn about LED lighting, Energy Star program, Environmental Protection Agency - USA, copyright in 2021,
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- Christmas lights, Wikipedia, the free encyclopedia, last modification made on September 10th 2021, https://en.wikipedia.org/wiki/Christmas_lights