

Compact Fluorescent Light Bulbs

Compact fluorescent light bulbs (CFLs) are small fluorescent light bulbs that only use 25% of the electricity used by traditional incandescent bulbs, and typically last eight to ten times longer. Given this low energy use, replacing regular light bulbs with CFLs can immediately reduce utility bills – up to several hundred dollars per year. These energy saving light bulbs fit regular light sockets and produce the same range of soft white to bright white light as incandescent bulbs. CFLs are available in a variety of sizes to work in standard light fixtures as well as recessed lighting and track lights. Some CFL bulbs are also designed to work with dimmable light switches.

Environmental Benefit

By using less energy than incandescent bulbs, CFLs reduce pollution and waste like carbon dioxide, sulfur dioxide, nitrous oxide and other particulate matter. In fact, if every household in the U.S. replaced one light bulb with a CFL, it would prevent enough pollution to equal removing one million cars from the road.

How to Choose a Bulb

When selecting a CFL bulb, you will need to consider bulb type/size, brightness, color and certification:

- **Bulb Type/Size** – CFLs can replace regular, incandescent bulbs in almost any fixture including table lamps, globe lamps for the bathroom, chandeliers, and recessed downlights. Check the bulb specifications to ensure the bulb is made for your type of fixture. Also compare the size of the bulb to the space available (height and width) in your light fixture before you make a purchase. If you need the bulb to work with a dimmer, look for “Dimmable CFLs” that are designed for this purpose.
- **Brightness** – The brightness, or light, of a light bulb is measured in lumens. CFLs produce the same level of light (lumens) at a much lower wattage (or power consumption). Therefore, to maintain the same light as your standard incandescent bulb you will need to choose a CFL that is about ¼ to 1/3 the wattage of the existing bulb:

CFL Bulb	Standard Bulb
14 watts	40 watts
20 watts	60 watts
25 watts	75 watts
32 watts	100 watts
50 watts	150 watts

- **Color** – CFLs are available in the same color options as standard bulbs including soft white, cool white and bright white. It is recommended that you use the same color type as the incandescent bulb you are replacing. Also, choose the same bulb color when you change multiple bulbs in one room. Another option for selecting a color is to look at the scientific color designation know as correlated color temperature (CCT): 2,700K, 3,000K, 5,100K , etc. The lower CCT numbers equate to warmer white; the higher numbers to cooler whites.
- **Certification** – When choosing bulbs, look for “Energy Star” qualified CFLs. These are bulbs that have been tested to meet stringent performance criteria established by the U.S. Department of Energy and the U.S. Environmental Protection Agency. The criteria ensure that all CFLs earning the “Energy Star” meet minimum lifetime and efficacy requirements, and are within maximum allowed product start and warm-up times.

Frequently Asked Questions

1. *How much do CFLs cost? Why are they more expensive than traditional bulbs?*

CFL bulbs can range from \$4 to \$15, but offer significant savings over their lifetime, more than offsetting their initial cost. For example, an 18 watt CFL bulb (equivalent to a 75 watt incandescent bulb) can save \$68 in energy costs over its lifetime. CFLs are more expensive to make than traditional bulbs because they have many more components and use special materials.

2. *How long does it take for CFLs to reach full brightness?*

CFL bulbs with “Energy Star” qualification are assured to turn on in less than a second, although it may take up to a few minutes for the bulb to reach full light output. Some manufacturers are now offering “instant on” technology in some spiral and mini-spiral CFLs. Look for this feature in the bulb specifications.

3. *What is the warranty on CFLs?*

Most manufacturers offer 1-2 year warranties on CFL bulbs. Manufacturers producing “Energy Star” qualified CFLs are required to offer at least a 2-year limited warranty (covering manufacturer defects) for residential applications. Keep your receipt and original CFL packaging in case the bulb fails within the warranty period.