

# Compact Fluorescent Light Bulb Buying Guide

Compiled by the MSJ Green Team

## Why buy compact fluorescents?

Two answers: less pollution in the air and more money in your pocket.

About 25 percent of your household budget is spent on lighting. CFLs use up to 75% less energy than traditional incandescent light bulbs and last at least 5 times longer. Switching to CFLs is an easy way to see immediate financial savings.

Replacing a single incandescent bulb with a CFL will also keep a half-ton of CO<sub>2</sub> (a global-warming gas) out of the atmosphere over the life of the bulb. If everyone in the U.S. used energy-efficient lighting, we could retire 90 average size power plants. Saving electricity reduces CO<sub>2</sub> emissions, sulfur oxides, nitrous oxides and mercury.

## Will CFLs work in my fixtures?

CFLs now come in many shapes and sizes to fit various fixtures, including torch lamps. They work with timers and 3-way switches. Some are designed for outdoor use, and some newer CFLs even work with dimmers (read the bulb packaging carefully to find one that will work with a dimmer).

*The following terms are helpful when choosing a bulb that will make you happy. After all, you'll be together for 7 years or so!*

**Watts:** This is simply a measure of the energy required to light the bulb. The higher the watts, the higher your bill. CFLs save you money because they require less than half the watts of a traditional incandescent bulb. A 13 or 14 watt CFL usually replaces a 60 watt incandescent. A 23 or 24 watt CFL usually replaces a 100 watt incandescent.

**Lumens:** This is a measure of light output. A General Electric Long Life 100 watt incandescent bulb gives off about 1700 lumens. The 23 watt Bright Effects bulb on the other side of this sheet gives off about 1600 lumens for less than a quarter of the energy.

**Color temperature (K):** CFLs are produced in varying shades of white:

- "Warm white" (2,700 K) provides a light extremely similar to that of an incandescent bulb, somewhat yellow in appearance;
- "Soft white" (3,500 K) bulbs produce a yellowish-white light;
- "Cool white" (4,100 K) bulbs emit more of a pure white tone; and
- "Daylight" (6,400 K) is slightly bluish-white.

The "K" denotes the color temperature in kelvins. The higher the number, the "cooler", i.e., bluer, the shade. (Source: *Wikipedia*)

## Questions or comments? Please contact a member of the MSJ Green Team:

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**Comparison of Standard Incandescent Bulbs and Compact Fluorescent Bulbs  
Assuming Bulbs Last only 1/2 the Life Stated on the Package**

Type	Watts	Lumens	1/2 the Stated Life Hours	Approx. Purchase Price	Power Cost for 4000 hrs	Replacement Cost for 4000 hrs	Total Cost for 4000 hrs	Total CFL Savings in 4000 hrs
<b>Common Table Lamp Bulb</b>								
Compact Fluorescent (CFL)	13	800	4,000	\$ 1.67	\$ 5	\$ 1.67	\$ 6.87	\$ 19.53
Compact Fluorescent (CFL)	14	900	4,000	\$ 2.24	\$ 6	\$ 2.24	\$ 7.84	\$ 18.56
Incandescent	60	800	1,000	\$ 0.60	\$ 24	\$ 2.40	\$ 26.40	\$ -
<b>Common Overhead Fixture Bulb</b>								
Compact Fluorescent (CFL)	23	1,600	4,000	\$ 2.50	\$ 9	\$ 2.50	\$ 11.70	\$ 26.70
Incandescent	90	1,600	1,000	\$ 0.60	\$ 36	\$ 2.40	\$ 38.40	\$ -

4,000 = Analysis Period in hours

\$ 0.10 = Cost per kW-hour

Comments:

Purchase price of CFL's may seem high, but the life expectancy difference makes the bulb purchase price comparable. See the "Replacement Cost" column above.

Standard fluorescent lights are very efficient, if you have the right application--perhaps a basement or work room.

Not all CFL's are equal, buy some samples and see which produce the most pleasing light.

CFL are larger than Incandescent bulbs so they may not fit all fixtures.

Most CFL's are not dimmerable--read the package carefully.

A Lumen is a measure of light output