



## Office of the Ohio Consumers' Counsel

Your Residential Utility Consumer Advocate

# CONSUMERS' FACT SHEET

### Office of the Ohio Consumers' Counsel

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# CFL vs. LED

## WHAT'S THE RIGHT LIGHT?



With almost all incandescent light bulbs having been banned, consumers now have a choice to make when it comes to lighting their homes: CFL or LED light bulbs. Both varieties of light bulbs will save energy and may help save money, however each has different characteristics. Knowing the differences and similarities between CFL and LED light bulbs will allow consumers to make an educated choice that can lead to savings on their electric bill.

### **CFLs: Compact Fluorescent Lights**

Compact fluorescent lights, commonly known as CFLs, do not run an electric current through a wire filament. Instead they drive an electric current through a tube that contains argon and mercury vapor. This process creates ultraviolet light that quickly translates into visible light.

### **CFLs: Pros**

CFLs have an average lifespan of 10,000 to 15,000 hours, and use about 70% less energy than incandescent light bulbs. Between the extended lifespan and amount of energy saved, CFLs save consumers

money throughout the life of the bulb. They are less expensive when compared to LEDs, averaging about \$3 to \$10 per bulb.

### **CFLs: Cons**

However, most CFLs take anywhere from 30 seconds to 3 minutes to reach their full brightness, and therefore they may not be ideal for areas that require instant light, such as stairways.

Modern CFLs contain a small amount of mercury, which is very harmful to both health and the environment when broken. For this reason, it is dangerous to dispose of CFL light bulbs in regular trash receptacles.

### **LEDs: Light-Emitting Diodes**

Light-emitting diodes, commonly known as LEDs, work by the movement of electrons through a semiconductor material, which illuminates the tiny light sources we call LEDs.

### **LEDs: Pros**

Due to a special feature of the LED, they do not become heated upon use

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The Office of the Ohio Consumers' Counsel (OCC), the residential utility consumer advocate, represents the interests of 4.5 million households in proceedings before state and federal regulators and in the courts.

The state agency also educates consumers about electric, natural gas, telephone and water issues.

For more information, please visit the OCC website at [www.occ.ohio.gov](http://www.occ.ohio.gov).



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and often stay cool to the touch. Unlike incandescent and CFL light bulbs, LEDs do not burn out. Instead they begin to dim and the color emitted can shift over time. LED light bulbs can last thousands of hours, depending on usage. That is up to five times longer than any comparable light bulb on the market. LEDs also light up instantly.

The energy efficiency of LEDs can lead to significant savings on your bill. A 60-watt replacement LED light bulb can save consumers \$132 in its lifespan.

### LEDs: Cons

When comparing costs, LEDs are more expensive than CFLs or incandescent light bulbs. However, LEDs are becoming more affordable.

A con of the LED is that many LEDs produce directional light, meaning they may not be ideal for lamps or light fixtures that are used to light large rooms.

### So who wins: CFLs or LEDs?

It's hard to beat the value offered by modern LEDs. Not only are their prices getting more affordable every day, but the bulbs may also last up to several years longer than the competition.

With soft and warm white hues that mimic the glow of traditional incandescent light bulbs, extended lifespan, and their instantaneous illumination.

However, no choice is the wrong choice. CFL and LED lights are both energy-efficient light bulbs that can save consumers money on their bills.

To learn more about energy efficiency, the Office of the Ohio Consumers' Counsel provides multiple fact sheets on its website at [www.occ.ohio.gov/publications/factsheets-smart\\_energy.shtml](http://www.occ.ohio.gov/publications/factsheets-smart_energy.shtml).

