

LED Lighting

Light-emitting diodes (LEDs) are the newest technology to be introduced on a broad scale for residential lighting. LEDs offer significant advantages over incandescent bulbs and even compact fluorescent light bulbs (CFLs), including lower energy consumption, longer lifetime, durability, smaller size and faster full illumination. By switching from incandescent bulbs or CFLs to LEDs, you will reduce your energy use and improve the quality of lighting in your home or business.

SAVINGS

By replacing the incandescent bulbs in just five of your most frequently used light fixtures with comparable LED lamps you will save nearly \$ 100 annually. The more incandescent bulbs you replace, the more you will save!

BENEFITS

- LEDs use less energy to achieve light levels comparable to traditional incandescent or fluorescent lighting.
- An LED can continue to operate 50 times longer than an incandescent bulb and 5 times longer than a CFL:
 - LEDs: 35,000 to 50,000 hours of useful life
 - CFLs: 10,000 to 15,000 hours
 - Incandescent Bulbs: 1,000 to 2,000 hours
- LEDs contain no hazardous materials, such as mercury or lead, unlike traditional lamps and ballasts.

ADVANTAGES

- **On/Off time:** LEDs fully illuminate very quickly.
- **Cycling:** LEDs are ideal for uses subject to frequent on-off cycling, unlike fluorescent lamps that fail faster when cycled often.
- **Solid-state components:** LEDs are difficult to damage with external shock, unlike fluorescent and incandescent bulbs, which are fragile.
- **Dimming:** LEDs can very easily be dimmed.
- **Cool light:** In contrast to most light sources, LEDs radiate very little heat. The lower heat output of LEDs means air conditioning (cooling) systems have less heat to dispose of. This feature of LEDs makes them suitable for aquarium, stage and even medical lighting.
- **Slow failure:** LEDs generally fail by dimming over time, rather than the abrupt failure of incandescent bulbs or CFLs.

DISADVANTAGES

- **High initial price:** LEDs tend to be more expensive to purchase but are actually cheaper to use over their lifetime due to their long life and remarkably low energy use. A CFL in your first grader's room will last until they are a teenager. An LED downlight in your newborn's nursery will last until they leave for college.
- **Insects:** LEDs are much more attractive to insects than sodium-vapor lights.

USING ENERGY WISELY

Here are some other ways to reduce electricity use:

- Install occupancy sensors and other lighting controls such as timers, photo cells and motion detectors to automatically turn lights on and off.
- Make use of natural light by properly positioning furniture around windows and skylights.
- Use reflective blinds and light-colored wall paint to reduce the need for artificial lighting during the day.
- Look for the ENERGY STAR label when buying light bulbs, refrigerators, air conditioners, and other appliances and devices.



For more energy-saving tips and to learn more about energy efficiency rebates and incentives, visit nyseg.com or rge.com.