Your Guide to More Efficient and Money-Saving Light Bulbs

With new energy efficient lighting standards come new kinds of light bulbs and more choices than ever. So how do you decide which bulb is best for your home and budget?

It’s as easy as 1, 2, 3…

**STEP 1** Choose bulbs based on how bright you need them to be. This is measured in lumens. The higher the lumens, the brighter the light.

**STEP 2** Once you’ve chosen the lumen output you need, determine which bulb has the lowest estimated energy cost per year. These will save you the most money.

**STEP 3** Finally, choose the other features you prefer, such as lifetime and light appearance. The ENERGY STAR® logo tells you which CFLs and LEDs meet minimum efficiency, lifetime and quality standards.

### Where can I find this information?

Nearly all light bulb packages now have labels that tell you what you need to know, much like nutrition labels on food. Want to know if a particular bulb is bright enough to meet your needs? Match the lumens information from its Lighting Facts label to the table above. If a bulb claims to be a “100 watt replacement” but is only 1200 lumens, for example, it’s really closer to the brightness of a typical 75 watt bulb.
Why are light bulbs changing?

In 2007, Congress passed and President Bush signed into law the Energy Independence and Security Act (EISA), improving energy efficiency for many products, including light bulbs. You can still buy incandescent bulbs that look and operate like the ones you are used to—the new ones just use less energy. The law also requires new light bulb labels to help you choose the most efficient bulbs, like LEDs and CFLs.

See the Savings on New Bulb Labels

<table>
<thead>
<tr>
<th>Bulb Types</th>
<th>Life</th>
<th>Costs</th>
<th>Year 1</th>
<th>Cost Annually</th>
<th>Total Costs over 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Incandescent 60 W</td>
<td>1 yr</td>
<td>Bulb Cost  $0.50</td>
<td>Energy Cost $8.02</td>
<td>$0.50</td>
<td>$8.02</td>
</tr>
<tr>
<td>Halogen Incandescent 43 W</td>
<td>1 yr</td>
<td>Bulb Cost  $1.50</td>
<td>Energy Cost $5.74</td>
<td>$1.50</td>
<td>$5.74</td>
</tr>
<tr>
<td>CFL 13 W</td>
<td>9 yrs</td>
<td>Bulb Cost  $3.00</td>
<td>Energy Cost $1.74</td>
<td>$0.00</td>
<td>$1.74</td>
</tr>
<tr>
<td>LED 10 W</td>
<td>23 yrs</td>
<td>Bulb Cost  $13.00</td>
<td>Energy Cost $1.34</td>
<td>$0.00</td>
<td>$1.34</td>
</tr>
</tbody>
</table>

- **Brightness** – The most important information on the label and the only way to know for sure how much light the bulb provides.
- **ENERGY STAR Logo** – Indicates which CFLs and LEDs meet ENERGY STAR requirements for efficiency, lifetime and quality.
- **Life** – Estimates in years how long the bulb will last. Long life bulbs save you the hassle of frequent bulb changes and help ensure that more efficient bulbs pay for themselves over time.
- **Light Appearance** – Tells you the shade of light. Incandescents produce warm white light—between 2700 K and 3000 K. Bulbs that produce cooler or more bluish light will have a higher rating, such as 4000 K to 6500 K. Most buyers will prefer the warm white color to “daylight” or “bright white” colors.
- **Energy Used (watts)** – Measures bulb energy use, not brightness.
- **Contains Mercury** – CFLs contain extremely low levels of mercury, less than 2.5 mg, and are completely safe to use in normal operation. NRDC’s fact sheet (www.nrdc.org/legislation/files/lightbulbmercury.pdf) contains more information.

Some bulbs last for 1 year and others last for 10 or more. Which bulbs cost the least in the long run?

While a traditional incandescent bulb may be the cheapest to buy, the overall cost of both purchasing and powering the bulb will be far higher than an LED. Over the longer life of an LED, those savings can be more than $50. The following table helps to illustrate why more energy efficient bulbs are the best bargain overall. Over relatively short time periods, CFLs can be a slightly better deal than LEDs, but LEDs win over the long haul due to longer life and lower energy use.

Table lamp comparison

- **Standard LED bulb**
- **ENERGY STAR LED bulb**

In table and floor lamps, you want the light to shine in all directions, so look for ENERGY STAR-labeled bulbs that are omnidirectional.

Recessed can comparison

- **Omnidirectional LED bulb**
- **ENERGY STAR Reflector LED**

For downlights and recessed cans, install ENERGY STAR reflector LED bulbs. The light going upward from omnidirectional bulbs can be wasted inside the fixture.