



for do-self or contracted repairs

## LIGHT BULB OPTIONS

Not so many years ago, purchasing light bulbs was simple. Now, traditional incandescent bulbs have been joined by newer, high-efficiency alternatives – compact fluorescent (CFL) and LED bulbs. How do these alternatives compare, and which should you buy?

Initially – bulb for bulb, as they sit on the store shelf – incandescents are less expensive than equivalent CFLs, which are less expensive than LEDs. The average life span of a standard incandescent bulb, however, is only 1200 hours; it uses 3285 kilo-watts of electricity annually and costs about \$329 per year to operate. A CFL, by comparison, has an average life span of 8,000 hours, uses 767 kilo-watts per year, and has an annual operating cost of \$77. LEDs, in turn, are far superior to CFL and incandescent bulbs in performance; an LED has an average life span of 50,000 hours, uses only 329 kilo-watts per year, and costs less than \$33 a year to operate. In other words, the initial cost of an LED lightbulb is more properly compared to the price of 6.25 times as many CFLs and over 40 times as many incandescents. On top of that come the significant, immediate, and ongoing savings in energy (and to the environment).

It may seem confusing, at first, to buy these new bulbs. Whereas incandescent bulbs were labeled according to *wattage* (the amount of power they use), both CFLs and LEDs are differentiated by *lumens* (the amount of light they produce). Thus, an 800-lumen LED (which uses only 6 - 8 watts of electricity) or an 800-lumen CFL (which uses 13 - 15 watts) will provide the same brightness as a traditional 60-watt incandescent bulb. You will also have, in most categories, color or "temperature" options, including "warm" light (resembling the yellowish light of an incandescent bulb) and "cool" or "daylight" bulbs (a blueish-white light suited to work areas and applying makeup).

Before purchasing any type of bulb, be sure that it will match your fixture's format and functions. Incandescents and LEDs – but not CFLs – can be dimmed, come to full strength immediately (important in stairways), work well in cold conditions (such as outdoor fixtures), and can be used in all horizontal and vertical positions. In the case of some older, specialty, or globe fixtures, your options may be more limited (at least at present), and you might need to consider converting or upgrading a fixture to take advantage of high-efficiency bulbs.

Finally, do NOT throw out a working bulb just to replace it with a more energy-efficient alternative. That wastes the energy it took to manufacture that bulb and transport it to your house. Wait for it to burn out, properly dispose of it (especially important for CFLs, which contain mercury), and then – after a bit of planning to identify your best choice – enjoy the cost savings and environmental benefits now available. It is well worth the effort.