

# THE COMPUTER CORNER

## No. 288: Let There Be Light, (revisited).

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I alluded to the topic in #286, Let There Be Light, but it really needs to be expanded. Why? To underline the fact that incandescent light bulbs have largely reached the end of their useful lives. It now just does not make sense to purchase them, from either a financial or environmental point of view. Of course, this is my personal opinion, but remember that I was the “light bulb guy” at a hardware store for over 25 years. And I still am the lamp fixture repair guy there, which gives me some additional insight into the issues that make this change to modern technology now worthwhile.

Lets start with a basic 100 watt light bulb. I have on my desk a package of four 100-watt equivalent LED (Light Emitting Diode) light bulbs. They are A-19 bulbs with an E-26 base, simply meaning that they are roughly the size and shape of 100-watt incandescent bulbs and screw into the same style socket. The pack of four 100 watt equivalent bulbs are now on sale (mid January 2022) at Hahn Mequon Ace Hardware for \$1.00, plus tax, or 25¢ plus tax for each light bulb. If you prefer less light output, for the same price you can get four 60-watt equivalent bulbs or four 75-watt equivalent bulbs.

The 100 watt LED bulbs I purchased put out daylight-equivalent light (cool white) at about 5000 K, about 1600 lumens. A side issue: You can also purchase LED bulbs which put out a warmer color light, more similar to soft-white incandescent bulbs, if you or your family members object to bright white light (though personally I find bright-white much better for both reading and fine work in the workshop than soft whites).

Although they are 100 watt replacements, these bulbs actually draw only 15 watts of power. They are giving you 100 watts worth of light but using 85% less power. So you are paying 85% less on your light bill.

What about life expectancy? For example, how long will the 100-watt equivalent LED model last? If you burn one for an average of 3 hours per day, it is rated to last 25,000 hours or just under 23 years (though they are fully warranted for 5 years from the date of purchase).

You may have heard that LED bulbs can cause interference with radios. This might have been true when they first came out, but no longer. Modern LED bulbs must comply with Part 15 of the FCC rules – “they may not cause harmful interference and must accept any interference received, including interference that may cause undesired operation”. I can assure you that any bulb flaky in this respect, or one that dies prematurely, will be replaced free if you bought it at Hahn Mequon Ace.

More rather amazing specs: these LED bulbs will reliably operate in ambient temperatures from -4 to +104 °F, and even in enclosed or recessed fixtures, and even in damp locations. They also work with LED-compatible controls and dimmers over the range of 100% down to 10%.

There is one more important attribute that needs closer attention. Because LED bulbs generally convert much more energy into light (and much less energy into heat), bulb sockets and switches are stressed much less than those that must control incandescent bulbs. I have yet to find a burned up socket that was controlling LED bulbs. All of the burned sockets I have had to replace during lighting fixture repairs (many hundreds of sockets over the years) were burned out by controlling high-heat-generating incandescent bulbs.

So there you have it. I defy you to find a 100-watt incandescent bulb that matches anything like the specifications outlined above. Save yourself energy bucks, lighting fixture repair bill bucks, and the bother of changing light bulbs so often by converting to LED light bulbs. Use your furnace to heat your home, not your light bulbs. All this just makes good sense. Happy Computing.