



# LED BUYER'S GUIDE

## MAKING THE SWITCH

When it comes to making the switch from traditional CFL and incandescent bulbs to LED, there are a few factors consider.

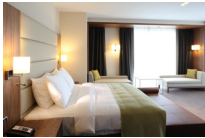
### Applications



Residential



Commercial



Hospitality



Retail

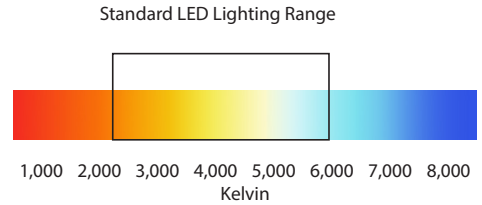


Health & Assisted Care

### COLOR TEMPERATURE

#### Which color temperature is right for your application?

Correlated Color Temperature (CCT) defines the color of the appearance of light, and is measured in degrees Kelvin (K). The cooler the light, the more blue tone it has, and the higher the number preceding the "K." The warmer the light, the more yellow it has, and the lower the number.



Commercial outdoor lighting applications, including lighting for parking structures, walkways, wall packs, and stairways, generally require a cool white. Applications needing a cool white would use a 5,000 K LED. Neutral, or white light, is generally around 4,000 to 4,500 K. Indoor retail, residential, and hospitality applications may call for warm light in the 2,700 to 3,000 K range.

### LUMENS

#### How much brightness is needed for your application?

The lumen rating of an LED is indicated by a number followed by "lm." Luminous output is the measure of how much light you are getting from a bulb. The higher the number of lumens, the brighter the LED will be. Most buyers have long-relied on the wattage to determine which bulb they want. LEDs greatly reduce the number of watts used, while still producing the same amount of luminous output as higher-wattage traditional bulbs. Therefore, to ensure that you choose the right LED for your application, consider the lumens rather than the wattage.

Exact specifications will depend on the products used for comparison, however, the following table will give you a rough idea of what the conversion from traditional CFL and incandescent lamps to energy-efficient LEDs will look like in terms of wattage and luminous output.

Incandescent	CFL	LED	Luminous Output
150 W	30 - 55 W	25 - 28 W	2,600 lm
100 W	23 - 30W	16 - 20 W	1,600 lm
75 W	18 - 22 W	12 - 13 W	1,100 lm
60 W	13 - 18 W	7 - 10 W	8,00 lm
40 W	8 - 12 W	6 - 7 W	450 lm

### WATTAGE

#### How much will you save by switching to LEDs?

The difference between equally-luminous traditional bulbs versus LEDs becomes significant when you consider the long-term savings. Take the example of a bulb used 5 hours per day, with an average cost of electricity at \$.12/kilowatt-hour. At the end of a year, a 60-watt CFL would cost \$12.96 in energy, whereas an equivalent-output 12-watt LED would cost only \$2.64. A savings of \$10.32 a year may not seem astronomical, but in the context of large hotels or commercial properties with hundreds of bulbs, the project savings is substantial. Additionally, there are other long-term cost benefits to choosing energy-efficient lighting. LEDs have longer lifespans, think 8,000-hours for a CFL versus 25,000 minimum for an LED. As technology continues to advance, many LEDs offer upwards of 50,000 lifetime hours. That helps buyers save in the cost of maintenance and replacement over many years.

Bulb	kWh per Month	Cost Per Month	Cost per Year
60 W Traditional	9 kWh/month	\$1.08/month	\$12.96/year
12 W LED	1.8 kWh/month	\$.22/month	\$2.64/year



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### CUSTOMIZATION

#### How can LEDs meet the requirements of your specific project?

LED lighting, especially LED PCB boards, can be customized to suit your particular project needs. LED PCBs can be manufactured or cut to specific sizes, can be controlled by most market dimmer switches, and come in a wide range of colors - not just whites. LEDs are available in wet/damp-location rated versions, frosted or clear housings, a range of directional beam angles, with internal drivers or compatible with line voltage.

LED retrofit kits are also available for projects needing energy-efficient lighting solutions while still utilizing existing fixtures. LED lighting is the perfect solution for forward-thinking businesses looking to maintain design aesthetics and excellent lighting, while reducing environmental impacts and hazardous materials used to manufacture the materials.

### REBATES & INCENTIVES

#### What rebates or incentives are available for companies who switch to LED lighting?

In addition to the long-term energy and maintenance savings, rebates and incentives are offered by cities and energy-conscious programs all over the country. Hoping to promote a cleaner environment and greener thinking, many municipalities are offering money-back rebates and even free replacement LED bulbs to companies looking to retrofit their existing lighting.

We offer the highest-quality products, backed by DLC, UL, FCC, Energy Star and RoHS to ensure that our lighting products meet the standards required by many of the rebate programs.



**Your LED Lighting Solutions Provider**

BTS LED, Inc. is here to help you determine the best LED lighting solutions for your project. We are a U.S. corporation specializing in the international sales, marketing and manufacturing of the most advanced and energy-efficient, technology-based products and services. Our focus has always been on providing the highest-quality products for today's energy-efficient economy.

Our products are subject to the highest test-quality standards to ensure that only the best materials are used to create the brightest and most efficient high and low-power LED lighting solutions for indoor, outdoor, and customized needs. With reduced energy consumption and low maintenance costs, BTS LED's lighting products combine increased value with the fewest environmental impacts.

Contact a representative today to find out what LEDs can do for you.

**On the web: [www.btsled.com](http://www.btsled.com)**

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