

2023-2024 LED LIGHTING GUIDE

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At Your Fingertips: Your Need-to-Know for LED Lighting

As LED lighting technology continues to become more mainstream – and, in some cases, mandated – do you and your clients have questions? We have the answers!

Take this LED “cheat sheet” from the pages of Furniture, Lighting & Decor, and save it for reference for your next project, or download as a white paper on furniturelightingdecor.com to print and hand out to clients and customers.

Thanks to Craftmade for this necessary information!

LED Benefits

Long Life. Most LED light sources have a working life of about 50,000 hours. (With normal use, an LED light should last approximately two decades.) An LED bulb may be a bit more expensive up front, but will result in significant savings over time.

Energy Efficiency/Sustainability. According to American Lighting Association Certified Lighting Consultant Bruce Paul, Owner of Passion Lighting in Grapevine, TX, “High-quality LED lamps allow for 80 percent less energy.”

It gets even better when we back that up! According to the Department of Energy, LED light sources use up to 90 percent less energy and last approximately 25 times longer than their incandescent counterparts.

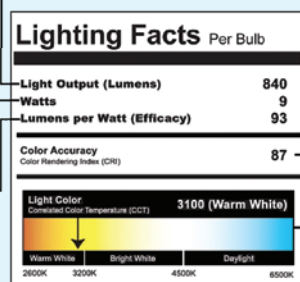
Safety: LED bulbs don’t heat up the way incandescent bulbs do. This makes them safer, particularly around children and pets, (and those boho-inspired lamp scarves). Cooler LED light sources can also reduce fire hazards.

Versatility: With the emergence of smart technology, many LED light sources (if WiFi enabled) can be connected to phone and voice apps for on-off, dimming, color-changing options and more.

Accessibility: As states (California, for example) roll out mandates eliminating incandescent bulbs, LED will eventually be the best lighting option. Nationally, the Department of Energy is in the process of eliminating the sale of all incandescent bulbs.

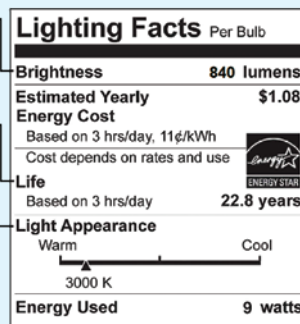
How to read light bulb packaging:

- Light Output (Lumens)**
The brightness of the bulb. Higher lumens means more light is emitted.
- Energy Usage (Watts)**
The energy required to light the bulb. Lower wattage means less energy used.
- Efficacy (Lumens/Watt)**
An indication of the efficiency of the bulb. A Higher number means it is more efficient.



- Color Accuracy
Color Rendering Index (CRI)**
CRI measures bulb color compared to sunlight. The higher the value, the truer the color of an object will appear.
- Color Temperature (Kelvin)**
Kelvin Color Scale indicates the color of the light. Higher K values are cool colors and lower K values are warm colors.

- Brightness (Lumens)**
Same as light output above. Higher lumens means more light is emitted.
- Life Expectancy**
How long you can expect the bulb to last based on a typical usage of 3 hrs/day.
- Light Appearance**
The same as color temperature. Higher K values are cool colors and lower values are warm colors.



- Energy Cost**
The estimated cost to use based on time and rate specified. It will vary depending on the actual usage and electrical rates.
- Energy Star Logo**
This logo means the product has met certain energy-saving criteria as set by the EPA and DOE.
- Energy Used (Watts)**
The energy required to light the bulb. Lower wattage means less energy used.



What to Look For

LED has light output that’s comparable to your favorite incandescent wattage if you know what to look for. Understanding the technology and range of such elements as Kelvin, Lumens and CRI (color rendering index) can ensure you get the correct lighting for your specific needs.

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WHY LED?

Understanding the Terminology

LUMENS: How much Light?

The higher the Lumens, the more light is enabled. For comparison, a 60-watt incandescent light bulb emits approximately 800 lumens, a 100 watt incandescent bulb would emit approximately 1600 lumens.

What you need to know: The difference between LED and incandescent is the number of watts used to reach the desired lumens. To produce 800 lumens (60-watt incandescent) an LED would use only about 9 watts (see chart on previous page).

KELVIN: Warm to Cool Color

A Kelvin is the scientific measurement for the color of the light itself.

What you need to know: Lower Kelvins = Warmer Light (yellow). Higher Kelvins = Cooler Light (blue)

Color Rendering Index: Accuracy

CRI is a measurement of the bulb color compared to sunlight.

What you need to know: On a scale of 0-100, the higher the value, the truer an object's color will appear. Look for a CRI of 85 or above for accurate color.

Best Uses for Kelvin Values

	RESIDENTIAL	COMMERCIAL
Warm White	2500K	Luxury clothing, shoe, home goods, and jewelry stores. Coffee shops. Intimate restaurants. Eclectic shops and bookstores. Waiting areas that need to feel cozy and relaxing. Hotel lobbies and bedrooms.
	3000K	
Neutral White	3500K	Office ceiling lights, meeting rooms, classrooms, restrooms, hotel bathrooms, store and mall ceiling fixtures.
	4000K	
	4500K	
Cool White	5000K	Commerical kitchens, task lighting, labs, surgery and treatment rooms, warehouses, manufacturing, high-tech stores, display cases, showrooms, barns, hangers, garages, car washes.
	5500K	
	6000K	
	6500K	



Trade Tip

Stay consistent in color temperature within a space. It's recommended you do not mix warm and cool Kelvin temperature bulbs. The clashing temperatures can change the appearance of your décor.

Assessing Needs

Which bulb temperature is right for you or your clients/customers?

1. Room Function

For the bedroom or living room: Warmer tones create a cozy atmosphere (up to 2700K). Task-related spaces such as a kitchen or office space can benefit from cooler-toned light (above 3500K) by helping to energize the space and increase productivity. Bonus: In the kitchen, neutral light can enhance the appearance of food.

2. Level of Natural Light

Does the space have natural light? The amount of natural light in a space can influence the color temperature of your chosen LED light source.

3. Personal Taste:

Preferences matter. Do you or your client prefer the warm, relaxing appearance the lower Kelvin bulb temperatures (2700K - 3000K) deliver? Or is the bright, clear energy of the cooler temperatures (3500K - 5000K) your preference?

4. Color Scheme

The color temperature of your lighting can change the appearance of your room's color scheme. For example, complementing a warm color scheme with a warm color light temperature can enhance the vibrancy of the warmth. It is recommended that you select paint, fabric and tile finishes using the same lighting color temperature you intend to use in the space.



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