HOW TO SHOP FOR LIGHTBULBS

Office of the Ohio Consumers' Counsel
"Your Residential Utility Consumer Advocate"
www.occ.ohio.gov

Consumers have many options for energy-efficient lighting, but selecting the right bulb can be difficult due to the complex labeling. Manufacturers are required to label brightness, appearance, and efficiency specifications on their packaging. This fact sheet simplifies the information to help you choose the best bulb to meet your needs.

The most popular light bulbs available are:

- LED (light-emitting diodes) bulbs, and
- CFL (compact fluorescent light) bulbs.

These bulbs may initially cost more than traditional incandescent bulbs, but save money because they use less energy.

Energy Costs

- *LED bulbs*—Energy Star-certified LED bulbs use up to 90% less energy and last up to 25 times longer than traditional incandescent bulbs.
- *CFL bulbs*—An Energy Star-certified CFL uses about 70% less energy than incandescent bulbs and lasts up to 10 times longer than a comparable traditional incandescent bulb. CFLs contain small amounts of mercury and should be taken to a recycling location.

Although halogen incandescent bulbs can meet the current federal minimum energy efficiency standard, LED and CFL bulbs are better choices for saving money. Note that as of August 2023, most incandescent bulbs have been phased out due to new federal efficiency standards.

It's hard to beat the value LEDs offer. Not only have they become more affordable, but they tend to last many years longer than other bulbs.



The average household can save about $225 in energy costs per year by replacing incandescent lights with LED light bulbs.

Brightness-Light Output

Consumers used to purchase bulbs based on wattage, but the best measure of brightness is lumens (lm). Watts measure the energy a lightbulb uses, while lumens measure the amount of light it produces. The fewer watts used, the lower your electric bill, but the more lumens, the brighter the light.

Incandescent watts (energy used)	Lumens (brightness)
40 w	450 lm
60 w	800 lm
75 w	1,100 lm
100 w	1,600 lm
150 w	2,600 lm

Light Appearance

Light appearance is measured in Kelvins (K). Lower K numbers make yellow light, while higher K numbers make whiter or bluer light. Traditional bulbs make a soft white light of around 3,000K, good for bedrooms, living rooms, and dens. Warm white lights (3,000K-4,000K) work well in kitchens,

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workspaces, and bathrooms. Bright white lights (4,000K-5,000K) make chrome and white fixtures stand out in bathrooms or kitchens. Cool white lights (5,000K-6,500K) are best for reading spaces.

Which color temperature is right for you?
Choosing the right color temperature is key in creating the desired atmosphere. Warm white lights create a cozy ambiance, while cool white lights energize and focus. Mix and match different color temperatures to achieve a unique look.

The different color temperatures are:

Warm Light (1,000K – 3,000K)
Tone: Cozy, yellow/orange glow
Best for: Relaxation and ambiance
Rooms: Living Room, Bedroom, Dining Room, Outdoor Patios

Neutral/Soft White (3,100K – 4,000K)
Tone: Balanced between warm and cool
Best for: General household lighting
Rooms: Kitchen, Bathroom, Hallways and Entryways, Home Offices

Cool White (4,100K – 5,000K)
Tone: Crisp, slightly bluish white
Best for: Tasks and focus
Rooms: Home Office/Study, Garage or Workshop, Laundry Room/Basement

Daylight (5,100K – 6,500K)
Tone: Bright blue-white light that mimics natural daylight
Best for: High visibility and color accuracy
Rooms: Bathrooms (makeup lighting), Craft or Art Studios, Home Gym, Retail/Display Areas

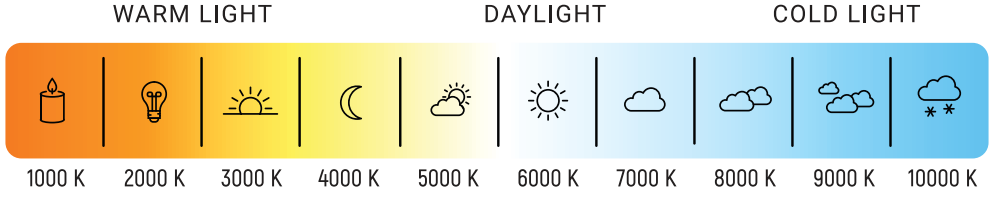
Very Cool/Blue-White (6,500K – 10,000K)
Tone: Very bright and bluish
Best for: Specialized or outdoor use
Rooms/Uses: Commercial or Industrial Spaces, Aquariums/Photography Studios, Exterior Lighting

Know your Bulb

LED bulbs are a durable and energy-efficient alternative to incandescent bulbs, lasting up to 50,000 hours and using 75-90% less energy. They emit no heat and reach full brightness instantly. Smart LED bulbs can be remotely controlled and programmed. They are more expensive initially but can lower energy costs over time.

Other Lighting Considerations
LED bulbs are cheaper and easier to use, so traditional bulbs are disappearing from stores. But, don't throw away your energy-saving CFL bulbs. They can last for many years and are up to 75% more efficient than regular bulbs. Just remember that CFLs have a small amount of mercury, so it's important to recycle them the right way.

Learn more about recycling and proper disposal of CFLs from the Ohio Environmental Protection Agency at https://epa.ohio.gov/. For more energy information go to www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money and www.energystar.gov/products/light_bulbs.



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