

# 10 Reasons to Flip the Switch to LEDs

## A better lighting choice for a better occupant experience

If your outdated facility lighting is leaving occupants feeling burnt out, consider changing more than a light bulb: change your lighting type. Upgrading your incandescent or fluorescent light sources to LEDs can cultivate a better occupant experience, generate sizeable energy savings, and support sustainability benefits at the local and global level. Learn how LEDs outshine traditional bulbs below.

### WHAT IS AN LED?

Light emitting diodes (LEDs) are semiconductor devices that turn electricity into visible light without the use of a filament, fluorescent tube, or gas. Each LED emits a single (or monochromatic) color of light, but multiple diodes inside one device can allow for a versatile use of color mixing to create millions of colors.<sup>1</sup>

#### 1 LEDS ARE MORE ENERGY EFFICIENT

Traditional light bulbs convert electricity into heat which reacts with chemicals or heats up a metal filament to produce light. This light is emitted in all directions, effectively using only 50–60% of all light produced and exerting a lot of energy. But since LEDs are diodes, they target light in a single direction, needing less heat to produce the same amount of light up to 90% more efficiently.<sup>2</sup>



#### 2 LEDS LAST LONGER

Because they lack failure-prone components, LED lights don't "burn out" or fail. Instead, LEDs slowly become dimmer overtime, a process known as "lumen depreciation."<sup>2</sup> The average LED light can shine for as long as 30,000 to 50,000 hours before seeing a 30% decrease in light output. In comparison, the average incandescent only lasts about 1,000 working hours.<sup>3</sup>

##### LED LIGHTS

30,000–50,000 hours<sup>3</sup>

##### COMPACT FLUORESCENT LIGHTING (CFL)

8,000–10,000 hours<sup>3</sup>

##### INCANDESCENT LIGHTS

1,000 hours<sup>3</sup>

#### 3 LEDS OFFER MORE CHOICES

Given the number of diodes, LEDs can achieve a wide range of color options. With color temperatures (measured on the Kelvin scale) ranging from 1,900K (warm candlelight) to 10,000K (the equivalent of bright blue daylight), LED-enabled facilities can produce the most ideal color and amount of light for every area.<sup>4</sup> Smart devices and IoT-enabled lights can set the mood as fast as the flip of a switch.<sup>5</sup>



#### 4 LEDS MANAGE HEAT USE BETTER

LED devices use heat sinks to absorb heat and dissipate it into the surrounding environment. This prevents the light from overheating and degrading faster and keeps the LED considerably cooler to touch. By comparison, the average incandescent bulb releases 90% of its energy as heat.<sup>2</sup>

#### 5 LEDS SAVE MONEY

The average 11-watt LED can produce as much light as a 75-watt incandescent, saving as much as \$1.25 per bulb per month.<sup>6</sup> Less heat production from overhead lights means naturally cooler facilities, relieving stress from A/C systems and cutting considerable costs associated with facility cooling.



#### 6 LEDS ARE PEOPLE-FRIENDLY

LEDs produce less heat, less glare, and are safe to touch even when in use.<sup>7</sup> Along with thoughtful, human-centric lighting design, LEDs can increase comfort, alertness, and productivity.<sup>8</sup>

#### 7 LEDS ARE SAFER

While a fractured or broken bulb can leave an incandescent light useless (and create a safety hazard in the process), a crack in an LED bulb would have zero impact on function. Unlike glass, plastic LED components are virtually indestructible.<sup>7</sup>



#### 8 LEDS ARE MORE VERSATILE

Given their durability and performance, LED lights are popular choices for indoor and outdoor settings, as well as cold environments.<sup>9</sup> With a reduced reliance on heat, LEDs don't have to overcome external temperatures to be an effective source of light.

#### 9 LEDS ARE SAFER FOR THE ENVIRONMENT

LEDs are non-toxic, while incandescent lights use a number of toxic chemicals such as mercury or halogen gas. When incorrectly disposed of, these harmful chemicals can spread and contaminate the environment. But LEDs don't require special disposal and last longer than other light options, creating less waste in the first place.<sup>10</sup>



#### 10 INCANDESCENT LIGHTS ARE OBSOLETE

Energy inefficient incandescent light bulbs are being phased out in the U.S.,<sup>11</sup> making the switch to safer, more efficient, and longer-lasting light sources inevitable.

Step into the benefits of brilliant lighting today.  
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