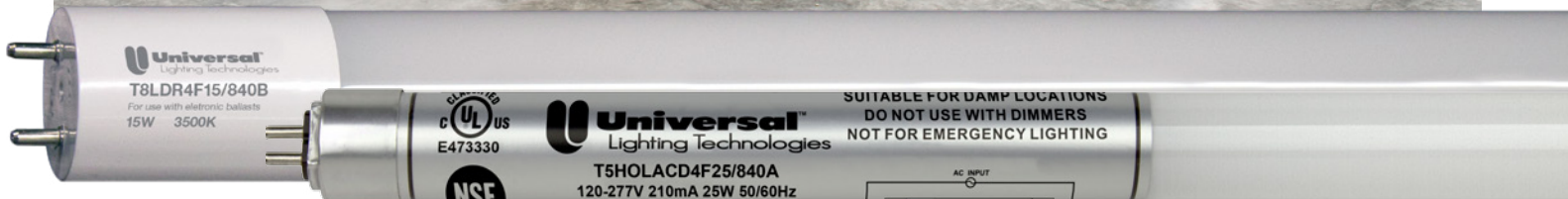


LED Benefits

Top Seven Benefits of Using LED Lighting



More than 30% of the electricity consumed in commercial and industrial buildings is used for lighting. Simply switching lighting to LED dramatically reduces energy consumption and has a number of additional benefits. Every business is (or should be) looking for more efficient energy solutions. What's the easiest way to quickly reduce your energy use? Simply switching to LED lighting. Here are the top benefits of LED lighting.

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#1 Energy Efficiency

LEDs use less power. This lighting technology is up to 50% more efficient than fluorescent, incandescent and HID lamps, before adding controls that save even more energy. This is especially helpful in places that are lit for extended periods of time. Look at Efficacy (lumens/watt) when doing comparisons between LED and other light sources. LEDs also eliminate ballasts, saving on energy and routine ballast maintenance/replacement/recycling costs.

#2 Longer Lifespan

Traditional light sources have short lifespans relative to LEDs, and cycling, temperature and other environmental conditions can adversely affect those lifespans. An LED fixture or lamp doesn't burn out - it simply operates continuously for years before the lumen output drops perceptively. A long lifespan eliminates maintenance replacement cycles, downtime and recycling costs, further enhancing the payback of an LED retrofit. It also ensures uniform lighting by eliminating the possibility of maintenance personnel installing the wrong color temperature.

#3 Extended Temperature Operation

Unlike fluorescent lamps, LED lamps work exceptionally well in cold temperatures – in fact, their performance goes up as temperatures drop. This makes LEDs a perfect match for indoor cold storage lighting, unheated warehouses, and outdoor applications such as parking lots.

#4 Rapid Cycling

LEDs are instant on/off and have no recovery time between on/off cycles. They are unaffected by rapid cycling as well, making them ideal for indoor retrofits with daylight harvesting, occupancy sensing, and event or scene-triggered changes. By contrast, most fluorescent lamps degrade every time they are cycled on or off and High Intensity Discharge (HID) lamps have extended warm up times and recovery times between on/off switching.

#5 Better Light Quality

There are five parts to superior light quality that a LED light source delivers compared to other light sources. Together, these can have a dramatic effect on the value and quality of the experience in a space and can improve the overall health of its tenants and visitors.

- **CRI:** LEDs have unparalleled color rendering (based on the Color Rendering Index), making for a truer, natural color perception
- **CCT:** LED lights are available in a wide range of correlated color temperatures (CCTs) from warmer, more yellowish incandescent white, to cooler, more bluish daylight
- **Dispersement:** LEDs are directional light sources, dispersing light in one direction, as opposed to other light sources that are omni-directional and require reflectors to bounce lights back into the intended space, or suffer light loss

- **UV/IR:** LEDs produce little UV or IR as compared to other light sources that can waste up to 90% of the electricity as Infrared (IR) or radiant heat. Furthermore, LEDs emit virtually no Ultraviolet light (UV), which can damage materials and present a burn hazard.

#6 Digital and Dimmable Operation

LEDs are solid state lighting (SSL) digital devices that can be precisely controlled to affect energy savings, respond to the immediate environment and set the mood of the space they are lighting. They are also easily dimmed, adding immediate energy savings and offering further controls to occupants. Integration with dimming and controls solutions can add 30% or more energy savings on top of the savings from the LED light alone.

#7 Environmentally Friendly

LED are environmentally friendly. They contain no toxic mercury or lead, which is safer and reduces recycling costs.

For specific questions about LED technology:

- Send your questions to Technical Engineering Services at tes@unvlt.com
- Contact your local Universal Lighting representative
- Email marketing@unvlt.com