



**Logical
Lighting**
Systems LLC

Logical Lighting Systems was founded two years ago to research, test and bring to market affordable, dependable and quality replacement LED lamps for the purpose of reducing energy consumption from antiquated light bulbs. We wish to improve the quality of life on this planet for future generations by reducing the electrical demand, thereby reducing the deadly mercury emissions and reducing the CO2 emissions.

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Advantages of LED Lights

The operational life of current white LED lamps can last 100,000 hours. The acceptable light output averages about 50,000 hours. The long operational life of an LED lamp is a stark contrast to the average life of an A19 incandescent bulb, which is approximately 2500 hours. If the lighting fixture is in a difficult to reach location, using LEDs would virtually eliminate the need for routine bulb replacement.

The key strength of LED lighting is reduced power consumption.

We are doing our part by creating a pathway to a lower carbon footprint and preserve our precious resources for as many generations as possible.

www.Consumerenergy.com has additional incentives to check for.

TRADITIONAL LAMP SOURCES						LED				
Lamp Source	Aperture (inches)	Optical Efficiency	Initial Delivered Lumens	Life (Hours)	System Watts	Number of LEDs	Initial Delivered Lumens	Life Hours - L70	System Watts	Energy Savings %
250W Quartz	6	70.6%	3,424	2,000	250	42	3,800	50,000+	84	66.5%
70W MH ED17	6	49.3%	2,662	16,000	94	28	2,600	50,000+	56	40.6%
32W PLT	6	59.1%	1,418	12,000	36	14	1,300	50,000+	28	22.5%
100W A19	4	41.8%	652	750	100	7	660	50,000+	14	86.1%

Even the small compact fluorescent lamps can be replaced to save money, but more importantly you will not be adding to the mercury pollution by bulbs that are improperly disposed. The LEDs are ROHS compliant and contain no harmful chemicals to the environment!!

Please email us for a free return on investment calculation for your home or business.

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GE Invests \$100M into LED lighting

GE purchased Emcore's 49 percent interest in the joint venture of LED technology with Nichia for \$100 million, demonstrating its ongoing commitment to invest in LED technology and the future of lighting.

This agreement combines GE LED system strengths in the Transportation, Signage, Specialty Illumination, and General Illumination segments with Nichia's extensive phosphor and optoelectronics products, such as LEDs. Both companies expect to benefit significantly from each other's expertise and

penetrate the high-growth LED general illumination segment.

About Nichia

Nichia is the leading company of Gan-based optoelectronics products, including UV, blue, green and white LED products and blue-violet laser diodes. The application of products includes cellular phones, digital cameras, traffic signals, full-color displays, electronics signboards, and optical storages.



LOGICAL LIGHTINGS SYSTEMS

Energy Savings News Brief

Holiday Inn Switching to LED in signs

Holiday Inn plans to use LEDs in new exterior signs at more than 3,200 locations, as part of a global re-launch of the company's logo and brand image..

Holiday Inn expects to cut energy usage by more than half and achieve an estimated 52% reduction in kilowatt hours with signs lit an average of 12

hours per day, 365 days per year. That represents an estimated reduction of 8,700 metric tons of carbon dioxide annually. The new signs are expected to save Holiday Inn an estimated \$4.4 million annually over previous neon and fluorescent lighting (\$3 million annual maintenance savings and \$1.4 million energy savings).

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Red Robin corporate restaurants Upgrade to Led lighting to save energy.



Red Robin Gourmet Burgers has replaced approximately 12,000 standard incandescent and halogen lights in more than 150 of its U.S. locations with new, more efficient 7-watt LED PAR 20 flood and spotlights, according to GE Consumer & Industrial. Red Robin is using the GE LED lights for general down lighting

applications that require a high quality of light, as lamp-to-lamp white LED color consistency. The LED lamps, which feature advanced optical controls that reduce wasted extraneous light, were installed in phases at Red Robin's restaurants from November 2008 through March 2009. The specific areas inside the restaurant illuminated with LEDs include the entrance and lobby areas, lighting over dining room tables and perimeter lighting. The use of LEDs helps preserve the ambiance of Red Robin restaurants

and customers' ultimate comfort, while supporting the chain's initiatives targeted at saving several hundred thousand dollars annually in lighting energy costs over the life of the new LED lights. Switching to LED lamps in our company-owned Red Robin restaurants offers immediate energy-cost advantages given the number of locations involved in our energy reduction. The new LED lamps cut energy consumption up to 77% and last more than six times longer.

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Walmart pilot program to replace parking lot lights with LED lighting.

The Wal-Mart Superstore, the first retail store to feature LED parking lot site lighting, based on specifications developed by the U.S. Department of Energy's (DOE's) Retailer Energy Alliance, the store opened on July 15, 2009, in Leavenworth, Kansas. The Superstore will serve as a test site to determine the viability of expanding LED parking lot lights at Wal-Mart stores nationwide. Wal-Mart is one of 43 retailers that are actively engaged in DOE's Net-Zero Commercial Building Initiative (CBI) as members of the DOE Retailer Energy Alliance

(REA). The alliance has attracted large and small retailers who are committed to reducing the energy costs, greenhouse gas emissions, and overall operating risks of retail businesses. The specifications for the LED lighting were sponsored by DOE and were developed by Pacific Northwest National Laboratory and retailers nationwide to address energy-efficient lighting opportunities. DOE's Solid-State Lighting Program provided technical assistance. LED parking lot lighting is a

new technology that has potentially enormous energy savings. LED lights are more precise in their direction, reducing waste light and limiting glare. DOE and its national laboratories predict that LED parking lot lights will reduce parking lot energy needs by more than 50% and maintenance costs by more than 80% compared to traditional parking lot lights.



Display case, counter and freezer LED lighting.

Retrofitting lighting or new lighting for your existing business displays can be a challenge. Space available, existing light design and light type all can bring new challenges to the problem. Logical Lighting systems has a huge selection of Point of Sale LED lighting solutions from jewelry to food display and everything in between. An Older display case that uses fluorescent tubes can be retrofitted with a LED tube and by removing the ballast creating more space and less heat. LLS also have display case l

ighting systems that are elegant and produce spectacular lighting for jewelry and other bright items. We have several different color temperature that makes your products look more appealing and with NO UV light to damage or discolor goods.

pay to refrigerate. Contact us today to find out what options we have for your needs.

In the freezer and freezer cases, led lighting reduces your costs further by not generating extra heat that you have to



By Switching those 10 bulbs to LED you will reduced your Co2 emissions by 444,780 pounds!

Retrofit is not always the right answer.

Many times a retrofit to LED lighting will not give you the best lighting value. Many times replacing the fixture completely with a LED lighting system gives you better technology, more longevity, less cost in installation and a better product. For example, a LED panel light to replace a ceiling lamp is designed for the LED lighting system so it spreads the light better with using less power. Other fixtures bring a new updated

look or take advantage of the LED's small size to create a lamp that is impossible using the old outdated lighting technology we are all so used to.

nology and gaining a updated look by using new fixtures instead of retrofitting can give you advantages that multiply the benefits of your lighting upgrade.

Taking advantage of the new lighting tech-

