



GREEN PAPER – WHY LED LIGHTING?



Why implement Light Emitting Diode (LED) lighting technologies?

The United States Department of Energy, with a 20 year viewpoint, projects that LED lighting technology shall reduce electricity demands by 62% and eliminate 258 million tons of carbon emissions. The following is a list of the major advantages of LED solutions:

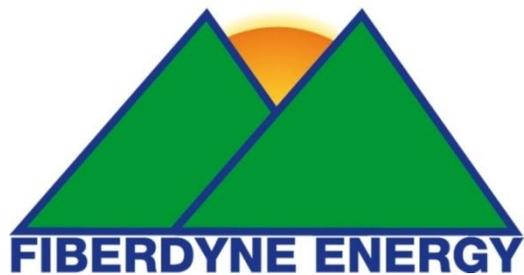
- **LONG LIFE.** The typical life of an LED light is greater than 50,000 hours. This is over 12 years if the light is utilized half of the time. LED lights will last up to 4 times longer than a fluorescent and at least 20 times longer than traditional incandescent technologies.
- **MINIMAL MAINTENANCE COST.** It is no longer necessary to have maintenance staff spending hours of very inefficient time swapping out bulbs with short lives. It will no longer be necessary to swap out starters or ballasts. The very long life of LED technology virtually eliminates annual maintenance costs.
- **REDUCED HEAT.** Lower power usages also equates to lower heat generation. LED lighting will generate less than 30% of the heat of traditional technologies. This can also be considered a safety advantage.
- **SAFTEY.** LEDs run with minimal heat generation so they are safe to the touch. They also do not produce any harmful UV rays.
- **DURABILITY.** LED Lighting is a solid state technology. It is very durable and can be subjected to very high levels of shock and vibration.
- **EXTREME TEMPERATURE.** LED lighting can operate in extreme temperature ranges (typical: -35 °C to +80 °C.)



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- **INSTANT ON...** There is no delay from the time an LED is powered to the time it illuminates. This allows for the addition of motion sensing.
- **COMPACT.** LEDs are very compact. They provide the highest light output per square inch than any other technology. Precision beam control is possible with various plastic lens.
- **LOWER INFRASTRUCTURE COST.** Lower rated components may be used in a new design (smaller gauge wire, smaller transformers, smaller breakers) costing less money.
- **COST SAVINGS.** Low power consumption equates to lower electricity bills. It is common to develop Return-On-Investment (ROI) models with returns less than 5 years.
- **LOW SURGE CURRENT (on start-up).** Peak demand loading is minimized, lowering energy bills for industry.
- **LED technology is viable today.** Contact Fiberdyne Energy today to start cost savings.

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Creating a Green Future ®

Looking for the latest green technologies? Contact us today:



LED Lighting

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