



## **LED technology: The hot button choice**

August 27, 2012 - Green Buildings

In the ever changing world of lighting choices, the building owner is bombarded with choices of removing the existing fixtures for new ones or retrofitting the existing fixtures with new technologies. The last pass was Compact Fluorescent (CFL), this time the hot button choice is LED.

LED technology has been around for more than 30 years, used in indicator gauges in car dashboards, or backlighting instrument panels. They are small, inexpensive, lasted a very long time and ran cool. In the last 5-7 years, the LED started to become a tool in lighting architecture and used for retrofitting building lighting. Like CFL the first generation was very cool or looked blue making people and buildings have a ghostly appearance. In the past 3 years the LED manufactures have realized the huge business potential in LED's for architecture. They have re-worked the recipe of the LED to replicate the performance and look of incandescent, warmer, more red and yellow in the LED, not so much blue. This opens up a whole new market to manufactures and many choices to the building owner, maybe too many choices. This is where asking questions, seeing similar installations and speaking to other building owners about their experience will pay off.

The joke in our business is, the most expensive part of a lighting fixture is the light bulb. Maintenance is the single biggest cost factor in a lighting system, along with energy consumption. If properly planned, LED could be the solution, but be informed. An incandescent lamp lasts about 1,000 hours, halogen about 2,500 hours, CFL lasts about 12,000 hours, a properly heat managed LED will last about 50,000 hours. Incandescent and halogen have become luxuries due the energy code and lamp life. CFL is now slowly being pushed out by LED. Light source efficiency is measured by lumens per watt, like miles per gallon in a car. Incandescent is 15 lumens per watt CFL is about 70 and LED's are getting close and sometimes passing that efficiency, add 4 times the life of CFL for maintenance, it is a compelling argument.

Be informed, see installations and do more research. In retrofit products make sure the LED is designed to be installed in a closed fixture, LEDs run very hot, if heat is trapped the 50,000 hour lamp life is lost. Make sure the Color Rendering Index is good, incandescent has a CRI of 100, CFL is 85, use LED's with a CRI of 80 or more. If installing new fixtures there should be a warranty of 3-5 years or more. Stick to name brand LED's like Cree, Philips, Xicato, and test them in your building before you commit.

Philip Cialdella is the president of Light Abilities, New York, N.Y.

New York Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540