Advantages of Solid State Lighting (LED)
Today, Solid State Lighting, also known as LED lighting, is the talk of the town! The market is growing at a rapid pace and with good reason. The innovative era of LED lighting comes with many benefits including big savings in energy efficiency, longer life, better light quality, better color rendering index and a huge reduction in operating costs over traditional lighting technologies.

Lighting in industrial and manufacturing facilities poses many challenges. These facilities are among some of the most complex to light because of its harsh environmental conditions, hard to reach areas, oversize machinery, high ceilings and a lighting design that must comply with fire and safety codes, just to name a few. For these reasons, LED lighting may be a great solution and investment as this lighting solution operates at two to three times less energy and can reduce up to 90 percent in maintenance, comparing to traditional high intensity discharge (HID), which many are still operating. Some more, powerful benefits of LED facts to keep in mind include:

**BENEFITS OF LED**

- Energy efficiency.
- Improved light quality
- Better photometric controllability
- Longer useful life of 60,000 - 100,000 hours with little to no maintenance; ideal for areas that are hard to reach, dangerous and difficult to maintain
- Less susceptible to vibration
- NO UV emittance

**CONSIDERATIONS OF LED**

- Very specific temperature range requirements
- Almost always requires a new layout and design
- Lead times for manufacturing the new LED fixtures can be long
- Very few fixtures today are designed to be field serviceable

While most lighting projects are driven by reducing annual energy spend, there are other important factors that bring value to business that should be considered. Having the proper lighting, both indoors and in parking areas, increases safety for employees and visitors. In addition, having a properly lit facility can create a more engaged workforce and, in turn, more quality work.

“Understanding the right lighting temperature and how it correlates to the work being done in a particular area is important,” said Slater Medley, Lighting Solutions Leader with Harshaw Trane. “Through customer feedback we have seen a direct correlation between proper light and occupant satisfaction, no matter the environment.”

LED advancement and expansion has given buyers many choices; however, there are still a few missteps when it comes to selecting the best LED products. Not all LEDs are equal. Buyers must do their diligence when considering LED lighting as an upgrade selection in order to receive the benefits that LEDs promise and, more importantly, to know when those promises aren’t real. Some considerations to look into or ask a lighting professional are:

- How is the LED binning selected?
- What kind of testing performance was done and what kind of hours were used? LM79-LM80 – TM81, does the fixture have an LED Facts label registered with the DOE?
- At what temperature was the product tested? Then compare to the temperature in your facility and asked for a revised test result on life.
- What is the color rendering index? Good color rendering will render to truer color and good contrast.

An LED solution is a long-term investment and researching before signing the dotted line will lead to a more satisfying results. What if you’re not a lighting expert? Who can you turn to? It’s best to seek out experienced individuals in the market that have obtained industry recognized lighting certifications and have a portfolio of successful projects and customer references. -MN

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