

Warehouse and factory lighting for a better bottom line



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Gas discharge lamp

Running and maintaining old factory and warehouse lighting systems is costing New Zealand companies' vast amounts of wasted money on power and unrecoverable repair and re-lamping costs.

The poor performance of such lighting can create workplace hazards due to lower than optimal illuminance. Poor visual conditions also usually go hand-in-hand with poorer productivity.

Gas discharge, also called high-intensity discharge (HID) lighting, depreciates in light output as soon as it is first turned on. The same applies to fluorescent lights. These both continue to grow dimmer with age but still consume as much power, and in many cases more, for this ever diminishing light output.

Would you still keep a car that used to do a hundred kilometres on five litres that now uses ten for the same distance?

Inefficiency

Many think energy efficiency is just a buzz-word, but if you can halve your lighting power costs while reducing its need for maintenance for the next ten years, imagine how much you could contribute to growing your company.

If you still have HID high-bay lighting in your facility, such as those large round lights and shades with ovoid-shaped lamps, you are well behind the game in terms of lighting energy efficiency and longevity. You may be in danger as well. The most commonly used lamp type for large-area lighting is metal halide. These lamps are prone to 'non-passive failure' which, in real terms, means they may explode and rain extremely hot shattered glass on items below. They also contain parts called capacitors which can catch fire later in life. This does not happen with LEDs.



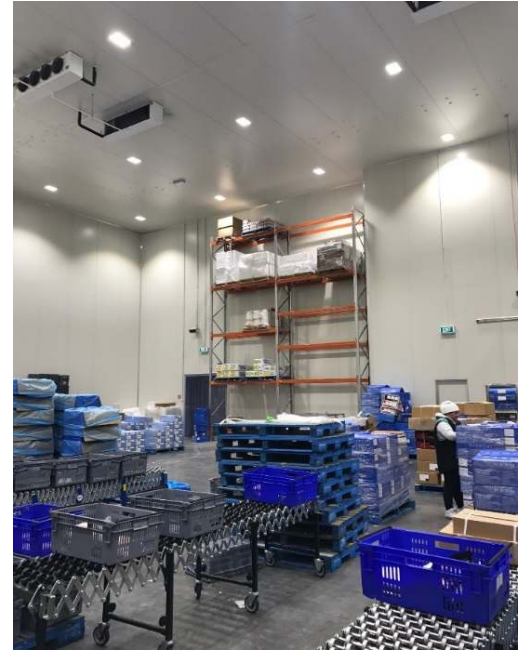
This Auckland outlet store was badly damaged when a HID high-bay light burst into flames. As a result, the store had to be closed for two months and suffered a major loss of stock and business revenue.

Lighting evolution

There have been two major steps forward since HID lighting saw its heyday. The first one was evolutionary the second revolutionary. The uptake of the slimmer T5 (16mm) fluorescent tubes for high-bay lighting as an alternative to for HID was for a number of reasons – As opposed to HID, one big advantage of T5 fluorescents is they can be switched on and off frequently, either manually or by motion detectors. Another advantage is the lamps do not depreciate as fast as HID, they do not flicker and waste much less energy in the form of heat than their HID counterparts. This meant T5 saved on both power bills and maintenance. One New Zealand manufacturer of T5 high-bay lights claims they save over 50 percent compared to metal halide HID lamps. When coupled with motion detectors, total savings are more like 80 percent on average. But wait, as they say, there's more.

Lighting revolution

The latest step forward in lighting is light emitting diodes (LED). This has revolutionised lighting and energy efficiency. Not only is LED more efficient than T5 fluorescent, manufacturers say it will last as much as ten times longer. Unlike HID, and to a lesser extent T5 fluorescent, LED takes virtually no time to come to full light output. It generates very little heat and has now surpassed all other artificial light sources in terms of luminous output for power used (lumens per Watt, lm/W). This means it is now the most energy efficient light source by a country mile. It even gets brighter when used in cool rooms and does not overload the chiller like other heat-producing light sources. We've now entered a new era of warehouse and other large-space interior lighting. Gone are the days of costly, inefficient installations.



Going LED

Today's high-quality LED lighting is all about flexibility, energy efficiency and lower maintenance costs. This is because lighting can account for up to 80% of a typical warehouse's energy bill. It is critical that lighting is as efficient and cost effective as possible. With its long useful life and powerful controls systems integration possibilities, LED-based lighting systems can illuminate effectively from a height, delivering light on the both vertical and horizontal planes and provide optimal visibility of racks, shelves and machinery.

The virtual elimination of lamp replacement also means fewer costly operational disruptions caused by such as getting access equipment into place and the like.

Safety

Keeping employees safe in the warehouse or on the factory floor is critical. Having good lighting goes a long way to achieving this.



Using twin linear LED fittings provides good vertical lighting on shelf faces and stock as well as good horizontal illuminance at floor level. This aids visual acuity and safety

There are specific light levels for a range of commercial and industrial tasks in the Joint Oz/NZ standard AS/NZS1680 and with the easy controllability of LED high-bays, which, many of are easily dimmable, it makes it easy to have various lights levels in a space while using the same light fitting. Also, many LED lights can be switched together or dimmed in groups, or individually, with sensors and other devices.

These control devices use a digital lighting control protocol, used by virtually all leading manufacturers, which is called DALI, standing for Digital Addressable Lighting Interface.

Having highly uniform, directional white LED lighting helps eliminate shadows and dark spots where accidents may occur. When you couple it with intelligent, easy-to-use lighting controls it lets you get the right light levels where and when they are needed, increasing the efficiency and quality of your operations. We can work with you to ascertain and meet your lighting requirements, providing an easy-to-use, state-of-the-art lighting system that will benefit your company well in to the future.

Call Tyrone, Roger or Pete now on 0508 776 337 to improve your company's lighting.