

COLD STORE LIGHTING TECHNOLOGY

In all fields of commercial and industrial activity technology marches forward, and failure to keep pace with new developments incurs the risk of being left behind.

Typical case in point has been the rapid progression of illumination systems in storage facilities – and more topically in temperature controlled environments.

Fluorescent tubes have been the traditional choice due to lighting quality, low profile shape, good energy efficiency, and obviously, capital cost. Light intensity has made use of these in modern, high ceiling, stores problematic in the past, but recent advances have largely overcome this problem.



Relatively frequent tube failure involving replacement at often considerable heights has been an obvious drawback – especially in the cold.

HID (high intensity discharge) fittings have become more common place – Sodium vapour offering very high efficiency, but not popular due to mostly unsatisfactory light intensity and colour rendition; with Metal Halide (mercury) providing far better light quality but greater energy consumption. MH units exhibit notable delay in warming up and switching down; and there are mounting environmental concerns because of the high toxicity of mercury.



Source: Light Kinetics.com

LED lighting technology has leapt forward in recent years and has become the system of choice in most modern commercial, domestic, and automotive applications – but perceived relative high costs have largely precluded their usage industrially. However with constant advances in production methods and volumes, prices have been decreasing rapidly to the level where they offer a serious alternative to the above-mentioned systems for warehouses and cold stores.

The first major advantage of LEDs is their huge energy saving – typically an LED unit will consume only approx. 25% of the electricity required for the same amount of light as traditional systems.

They also have the quality of producing hardly any heat – a big bonus in cold environments – and provide increasingly acceptable light quality. Last, but by no means least, is their almost indefinite life-span (regardless of how often they are switched on and off) so will hardly ever need replacing.

It may not be common knowledge, but for those users deeply motivated by energy savings, it is apparently now possible to replace the bulbs in HID fittings with LED bulbs without any other modifications.

Barpro are not lighting experts, and offer the above only for consideration. However we believe that we have a duty to offer to our customers the best advice available on all aspects of cold-store design and development, and as such will be pleased to direct any enquiries on this subject to trusted specialist partner companies.