

Advantages of LEDs

Energy Efficiency - Low Running Costs

LEDs are very efficient at converting electricity into light. In LEDs, 80% - 90% of the electricity is converted into light, compared to 20% or less for traditional bulbs. LEDs are also directional ie they emit light in a certain direction(s) rather than conventional bulbs which emit light (and heat) in all directions. This leads to a further reduction in wasted heat & light.

Long Life

Almost all LED luminaire manufacturers quote a life of at least 50,000 hours. As Leds don't burn out and rarely fail, a second figure - usually L70 or L80 - is often also shown. This relates to the service life, L80 means that at 50,000 hours there will still be 80% of the light output on day one. Based on 12 hours a day use, 365 days a year, an LED will last around 11.5 years.

In comparison the now outlawed Tungsten lamp would give 1000 hour life, a low voltage lamp would typically give up to 5000 hour life, a Metal halide discharge lamp would give 12,000 hour life and a T5 Fluorescent up to about 20000 hour life.

The longer life of LEDs reduces maintenance and replacement costs in commercial applications.

Little Heat and no UV LIGHT emission

Led illumination produces little infrared (radiated heat) and close to no UV emissions. This makes LEDs ideal for illuminating goods and materials that are heat or UV sensitive.

Environmentally Friendly

LEDs are free of toxic chemicals and are 100% recyclable unlike fluorescent lights that contain a lot of different chemicals including mercury. LEDs low energy consumption and long life further enhance their green credentials.

Instant Light & Frequent Switching

Unlike other lamps such as fluorescents which take time to warm up to full brightness, LEDs are near 100% instantaneous. They can be switched on and off many times without effecting lamp life or light emission. This makes them perfect for use with switch types such as PIR and occupancy sensors.

Operate Well in Extreme Temperatures.

Leds perform well in cold and low outdoor temperatures which may present problems for fluorescents and other traditional lamps types.

Design Flexibility

Typically much smaller than conventional light sources and LEDs may be combined into different shapes to produce highly efficient lighting. Leds can be individually dimmed and do not require filters to create coloured light, giving dynamic control of light, colour and distribution. Well-designed LED illumination systems can achieve fantastic custom lighting effects, which are not only visually uplifting but also enhancing the mood and state of the human mind.

Durability

LEDs are solid state devices containing no moving parts and no filaments to burn out so are durable and resistant to shock, vibrations and impacts. This makes them particularly suited for outdoor lighting systems where rough conditions, exposure to adverse weather and even vandalism may be encountered.

Low Voltage Power Supply

LEDs can run on low voltage power supply. This makes the technology easy to use in outdoor environments and can be connected to solar-energy sources for use in remote or rural areas.

