



Environmental Benefits

Overview

Compact fluorescent lamps (CFLs) are proven to use 80% less energy and be more environmentally friendly than traditional light sources. In fact, many countries have already implemented or are planning to introduce legislation to phase out incandescent light bulbs in favour of CFLs. Technological advancements have also enabled safer and higher quality CFLs to be developed which is a welcome response to the environmental issues surrounding the use of liquid mercury experienced by consumers using lower quality alternatives.

Production

According to statistics released by the US Environmental Protection Agency, the highest source of mercury in our air comes from burning fossil fuels such as coal. 70% of power plants are coal fired and burn fossil fuel for energy. In general, such a plant would emit 10mg of mercury to produce enough electricity to run an incandescent bulb, compared to just 2.4mg of mercury to run a CFL for the same amount of time.

Use

Compared with incandescent bulbs, CFLs deliver incredible lighting performance while consuming 80% less power, and generate 80% less CO₂. CFLs also emit less heat than incandescent bulbs, contributing to a reduction in energy consumption from air-conditioning units and further reducing CO₂ emission that causes global warming. In addition to impressive lighting performance, CFLs also typically last 8 to 15 times longer than traditional incandescent bulbs, reducing the amount of replacement bulbs a fitting will need throughout its lifetime and subsequently reducing wastage and landfill.

Disposal

MEGAMAN®'s full series of energy saving lamps use amalgam rather than liquid mercury. The mercury inside amalgam can be collected, recycled and reused more readily and mercury vapour is not released if the amalgam is exposed under room temperature, it therefore does not pose a health hazard or pollute the environment. During disposal, all parts of the lamp can be recycled, including the glass tube, amalgam and lamp housing, minimising the environmental impact at all stages of the product life cycle.

With due consideration for materials and product recovery at the end of a product's life, MEGAMAN® CFL lamp recovery rates are at present at 82%, which is 12% higher than the WEEE Directive standard for CFLs.

Mercury Amalgam

The amalgam used in MEGAMAN® CFLs contains only a small amount of chemically bound mercury in stable solid form. Mercury vapour does not release until it reaches around 100°C under atmospheric pressure, this safer technology also prevents land and water contamination from mercury leakage even if the lamps are not properly recycled. In addition to the mercury being more stable, there is only a tiny amount. MEGAMAN® lamps provide excellent illumination performance at minimal mercury levels, on average less than 2mg per lamp, well under the 5mg limit for mercury set by the EU environmental regulation, and less than in other household items such as button cell batteries and thermometers. All MEGAMAN® lamps are compliant with the EU RoHS directive on the use of hazardous substances in electrical and electronic equipment.

