



LEDs provide major benefits for emergency lighting luminaires and exit signs

In a building emergency, especially fire, fast panic-free evacuation can make the difference between life and death. This is why UK legislation demands reliable, good quality emergency lighting to ensure that people can see and that escape routes are properly identified and illuminated. ICEL, the emergency lighting arm of the Lighting Industry Federation (LIF), explains that the latest LED-based emergency lighting solutions can make this easier to achieve, with significant additional benefits.

Thursday 17 July 2010, London - White LEDs have been developed by the major lamp manufacturers to the extent that they are now in widespread use and expanding to general lighting applications. Such LEDs were suitable for exit signs about three years ago, but the technology has been improved to the extent that there are now LED equivalents for many conventional lamp types, and the cost is coming down all the time. Therefore, LEDs are now suitable for not only exit signs, but also for other emergency lighting luminaires, and they bring many benefits for lighting designers, building managers and building occupants.

Emergency lighting and escape route illumination must make it easy for people evacuating a building to see clearly enough to safely and quickly make their way out, using the nearest and shortest designated exit paths. Most people unfamiliar with a building tend to leave it the same way that they entered it, often ignoring shorter escape routes if they are not clearly marked.

M/f

...2

Compliance with BS EN 60598-2-22, the emergency lighting luminaires standard, and EN50172 (BS 5266 series), the emergency escape lighting application series of standards, together ensure that there will be sufficient illumination for people to see and be directed towards emergency exits, with exit or directional signs being in view at all points along the escape route.

LED benefits for emergency lighting

White LEDs can be designed to produce bright, uniform light, and have a number of advantages, including relatively high energy efficiency, long life, good reliability and well directed light output. They are also unaffected by extremely low temperatures and are nearly unbreakable. LEDs can be designed into buildings, structures and materials in ways that are impossible with conventional lighting and, therefore, can provide more freedom in the design of emergency lighting luminaires, which can be made to look sleek, modern and unobtrusive.

Because individual LEDs are almost a point light source, light control is simple, and well-designed LED emergency lighting luminaires - which have special optics - can use virtually all of the light emitted. Therefore, the high optical efficiency of LED luminaires means that they can achieve the designed illumination for less initial flux (light) than would be needed from a conventional light source (e.g. a fluorescent lamp). Compared with equivalent fluorescents, good quality LED emergency luminaires and exit signs often show energy savings of 30% or more, which will result in significant cost savings over the life of the installation.

LEDs typically have a 60-degree beam, so when correctly installed at 3m mounting height at recommended spacings, emergency lighting luminaires should have no trouble achieving the required 1 lux at the floor, using just two 1W LEDs, plus LED control gear (driver), inverter and a three-hour non-maintained 3.6V battery.

Exit signs must be sufficiently well lit to be clear even at maximum viewing distances, according to application standard EN1838 and the luminaire construction standard

M/f

...3

EN60598-2-22, which define minimum luminance levels that signs must achieve. LEDs are most effective in 'edge light' signs.

Savings on maintenance

Maintained emergency lighting and exit signs provide the best building safety, but maintenance costs will be higher than for a non-maintained installation because of the aging of the lamps. LED lamps have a much longer life in these applications and will significantly reduce maintenance costs and disruption to offices etc.

In summary, LEDs are well suited to emergency lighting solutions, so there is every reason today to use the latest, good quality, LED emergency lighting products from reputable manufacturers. As a safeguard, purchasers could check that the proposed supplier is an Industry Committee for Emergency Lighting (ICEL) member.

ENDS - Word Count: 688

CAPTIONS:

EMERGILITE_Serenga_EscapeRoute.jpg

The Serenga LED-powered escape route sign from Emergi-Lite.

P4_Stairway.jpg

How LEDs can benefit emergency lighting design – this is P4's elegant Stairway LED emergency lighting system.

Notes for editors:

1) About ICEL

ICEL (www.icel.co.uk) is a trade association that is the foremost UK authority on emergency lighting, and its members are manufacturers of components and products for emergency lighting fittings. ICEL's representatives serve on BSI and International Standards committees, developing harmonised product and application standards. Therefore, ICEL members are well placed to give advice on product selection and can be expected to provide good quality emergency lighting products.

2) Emergency lighting under BS EN 60598-2-22

Self-contained luminaires - These provide maintained or non-maintained emergency lighting in which all the elements (such as the battery, lamp, control unit, and test and monitoring facilities where provided) are contained within the luminaire or adjacent to it (within 1m cable length).

Centrally supplied (slave fittings) - In these fittings, the lamp and some of the control gear is located in the luminaire, but the charger and battery (and often the changeover device) is located remotely, providing the supply to a number of luminaires. Central power units may supply the luminaires with a range of DC voltages, or at 230V AC from an inverter. To operate on DC, some are specifically designed as emergency luminaires; others are converted mains luminaires.

Contact: Bernard Pratley

ICEL

Ground Floor, Westminster Tower,
3 Albert Embankment, London SE1 7SL

Tel: 020 8677 0718

Email: info@icel.co.uk

Web: www.icel.co.uk

Contact: Bernard Pratley

Lighting Industry Federation (LIF)

Ground Floor, Westminster Tower,
3 Albert Embankment, London SE1 7SL

Tel: 020 7793 3020

Email: info@lif.co.uk

Web: www.lif.co.uk

Contact: James Hunt

54 Applesham Avenue, Hove,
East Sussex BN 3 8JJ

Mobile: 0775 247 2812

Tel: +44 (0) 1273 725322

Email: james.a.hunt@talktalk.net

PRESS RELEASE