

EMERGENCY LIGHTING

a brief guide


**THE
LIGHT
SOLUTION**
Lighting supply made easy



Hospitality

Commercial

Industrial

Retail

Exterior

EMERGENCY LIGHTING

The aim of this guide is to give you a practical understanding of emergency lighting and its many variants.

Emergency Lighting is a legal requirement, to ensure that the means of escape can be easily identified and safely used by and occupants, at any time, including during a fire evacuation or a power cut.

The emergency lighting standard is BS5266-1.

In 2005 the Fire Regulatory Reform Order / Fire (Scotland) Act was introduced in England, Wales and Scotland. This places a liability onto the 'Responsible Person' to ensure emergency lighting is adequate and in-repair. The Fire Service enforce this and breaches can result in criminal fines or prosecution.

Emergency Lighting has to meet high demands and, due to the requirements of commercial business, there are many variations of mounting options, luminance and life-cycle. As much as the main function of emergency lighting is safety and practical – we can still offer stylish designs for those areas where aesthetics are important or we can offer a wide range of integrated emergency products to help you meet your legal requirements in the best way for your business.

WHAT IS EMERGENCY LIGHTING AND WHAT TYPES ARE AVAILABLE?

When power is cut or stops supplying the luminaire with power, the emergency back up will activate, giving enough light output to allow a safe evacuation of the premises. The power can be provided via an emergency battery within the fitting or an external central battery or generator.

This is a British Standard.

There are many different types of emergency lighting and the following gives an overview of the different types available, based on the standards description. However please also be aware that, in addition to providing emergency lighting many fittings are also required for functional day-to-day non-emergency lighting, providing both the general level of light and ambience of the area – all aspects need to be considered when choosing the right emergency fitting for each area.

Maintained – these fittings operate as normal light fittings, switching on and off with other light fittings in the area. Then, if and when the power fails, the emergency fittings illuminate via their battery backup, whereas all the others will not function.

Non-Maintained – This luminaire will remain in off mode and only illuminate once power has been cut.

Self-test emergency lighting luminaires use the latest intelligent emergency modules, where the unit routinely tests itself, thereby removing the need for manual testing. It will also automatically flag up and identify the fault, so it is hugely cost effective.

Central battery systems mean the luminaires do not have an integrated emergency battery. Instead, they use a common central battery system, which can be 50v/110v and 240v.

Another common version of emergency lighting is **Combined maintained** emergency – this is a utility light providing both general lighting levels and emergency lighting. In some fittings one lamp may provide the general lighting, whilst a secondary lamp which is then ignited when the emergency battery pack is activated.

WHAT IS EXPECTED OF EMERGENCY LIGHTING?



This guide gives an overview of emergency lighting. However, for further in-depth information please also refer to BS2566-1; BS EN 50172:2004/BS 5266-8:2004, alternatively NICEIC & ELECSA Snags and Solutions; Emergency Lighting part 4.

BS2566-1 states that a minimum of 1 lux at floor level is required for escape routes. Therefore, luminaires need to be equally spaced to make sure this is the case, in event of power failure, to ensure safe evacuation can be completed. Lux is a measure of brightness measured at a plane – this varies from a Lumen which is a measure of light emanating from a source e.g. a lamp.

Emergency Lighting should be tested monthly which is in accordance with BS EN 50172:2004/BS 5266-8:2004.

Defined Escape Routes

Minimum levels of illumination are recommended by clause 5.2.5 (BS5266-1) – an overview of this is as follows;

Escape routes <2m wide – should be at least 1 lux minimum light level with the central band providing at least half the light level.

Escape routes >2m wide are treated as open areas as detailed below.

Please note: dependent on your business type, some occupants, such as the elderly or people who are visually impaired, will take longer to perceive objects and adapt to the changes in lighting. Therefore, the illuminance in these areas may be required to be greater than the minimum value set out in the standard – which is 3 lux of the centre line of the escape route (clause 5.2).

Luminaires will need to be provided at all 'Points of Emphasis' (as per BS5266-1 clause 5.2.8) – which includes any changes in direction; stairs; changes in levels; escape exits (inside and out); fire alarm call points; fire extinguisher points; safety signs and routes to safety outside.

Open Areas & Rooms

The objective in these areas (also known as anti panic) is to provide lighting to a sufficient level, so that occupants feel safe and can move towards a place of safety, when supply to normal lighting fails. It is recommended (clause 5.2.6) that, excluding 0.5m around the edge of the room, the area has a minimum light level of 0.5lux at floor level.

Open areas are defined as:

- Rooms >60m²
- Any areas with have escape routes running through them
- Any areas where the site risk assessment has highlighted the requirement for emergency lighting. For example, underground or windowless areas, areas of high occupancy or if equipment needs switching off before exiting the room.



High Risk Task Areas

In areas of particular risk, to allow for the safe closure of prospectively dangerous activities, clause 5.2.7 suggests that illuminance of not less than 10% of the normal light levels are provided.

! *Please note it is always recommended, where possible, to try and exceed the minimum expectations, as this lighting is only required in times of danger and evacuation. The aim is to help clear the building as safely as possible and providing good emergency lighting is imperative to this process.*

The Light Solution offer a wide range of emergency lighting fittings and accessories to meet your requirements - please contact us for further information.

Emergency Design Areas of Emphasis

Such areas are considered when emergency lighting designs are completed, where emergency lighting has to be near to the following points: N.B. The standard considers near as “within 2 meters”.

- Each exit door intended to be used in an emergency or as a route end point – don’t forget to illuminate the exterior of the emergency exits too.
- Stairs – each flight receives direct light
- Any changes in level
- Mandatory emergency exits and safety signs
- Any change of direction
- Intersection of corridors
- First aid points
- Firefighting equipment
- Fire alarm call points

Please also note that, within public buildings, toilet facilities exceeding 8m², must have emergency lighting provided in line with open areas. Access toilets or any multi cubicle facilities with borrowed light should have emergency illumination from at least 1 luminaire.



Control Rooms – are areas that also feature emergency lighting. Areas such as;

- Motor Rooms
- Control Rooms
- Plant Rooms
- Switch Rooms

These should have emergency lighting adjacent to the main switchgear or control equipment associated with the provision of normal or emergency lighting to the premises.



Please find following a small selection of the products we offer in our emergency lighting range. For a comprehensive list of products and additional information, please do not hesitate to contact us for further information.

Duration of battery back up

This is dependant on the use of the building;

A 3 hour duration is required in places of entertainment, buildings that have sleeping risk or if evacuation is not immediate/where early re-occupation maybe required. Blocks of flats would also fall into the category, as part of the sleeping risk. As a guide the following buildings should have 3 hour emergency duration;

- Hospitals
- Hotels & Guest Houses
- Boarding Schools/Colleges
- Care Homes
- Theatres/Concert Halls/ Cinemas
- Exhibition Halls
- Restaurants
- Pubs & Bars
- Museums/Libraries/Art Galleries
- Shopping Centres

1 hour duration may be acceptable in some premises if evacuation is immediate and reoccupation can be delayed until the battery has recharged.

This guide has been produced as an overview and is not a definitive standard - please refer to BS5266-1 for further information or other relevant bodies.

4 IN 1 LED EXIT LIGHT



1w LED module with down, left, right arrow.
Adjustable height, 28m viewing distance
250-600mm x 350mm x 40mm

EDGE LIT BRASS EMERGENCY SIGN



Edge lit brass/chrome/white suspended fitting.
Adjustable height.
250-600mm x 350mm x 40mm

LED EMERGENCY BOX



LED Emergency Exit Sign, complete with all ISO 7010 directional signs,
2 conduit entry signs for flexible fitting
65mm x 390mm x 65mm

BULKHEAD – BACK OF HOUSE



Emergency downlight available as a maintained and non maintained fitting
(wire link for non-maintained)
3 hour battery life 3.3w = 196lm

RECESSED COIN CELL EMERGENCY PACK



Recessed Coin cell single spotlight non maintained.
3w = 171lm output

CIRCULAR LED 2D EMERGENCY FITTING



Circular wall or ceiling mounted 14w LED circular fitting,
IP54 fitting 120deg beam angle white fitting
Colour: 3000k/4000k/6000k

600 x 600 LED PANEL with remote emergency pack

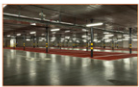


600mm x 600mm
LED panel
40w low glare white trim emergency fitting
3 hr battery life
Colour: 3000k/4000k/6000k

TWIN EMERGENCY FITTING



4' 1200mm
36w LED Twin emergency fitting
IP65 with stainless steel clips
3 hr battery life
Colour: 4000k/6000k



5' 1500mm
72w LED Twin emergency fitting
IP65 with stainless steel clips,
3 hr battery life
Colour: 4000k/6000k

SOLO DOWNLIGHT



Solo Downlight 10w colour change fitting 3 hr battery life dimmable
Colour: 3000k/4000k/6000k

LED DOWNLIGHT



LED Downlight 12w 3hr Emergency remote pack
174mm diameter
Colours: 3000k/4000k/6000k

LED Downlight 18w 3hr Emergency remote pack
225mm diameter
Colours: 3000k/4000k/6000k

LED Downlight 20w 3hr Emergency remote pack
240mm diameter
Colour: 3000k/4000k/6000k

LED PANEL



1200mm x 600mm LED panel 72w
low glare white trim emergency fitting
3 hr battery life
Colour: 4000k/6000k

EMERGENCY TWIN SPOT



Emergency Twin Spot
2x3w LED
3 hour battery life

EMERGENCY EXIT LED SIGN



Emergency Exit LED Sign 125lm in both mains and emergency available in
Brass, Chrome, Black and IP65 versions
Available in single or double sided – legends can be removed at either end.

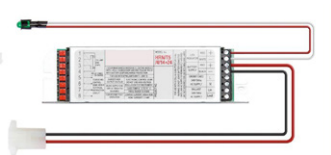
ACCESSORIES

EMERGENCY BATTERIES



Available from 2 cell – 6 cells as standard available inline or side by side. Large selection of emergency batteries available please contact us for further details.

EMERGENCY INVERTORS



We offer a large range of emergency invertors from leading suppliers please contact us with the details of the products required for prices.

EMERGENCY GEAR TRAYS



2D CFL, LED or linear gear trays can be supplied in a wide range of options please contact us for further information

ADDITIONAL SERVICES

The Light Solution can offer conversion of existing fittings to emergency including central battery, self test or dali addressable – these fittings can also incorporate sensors and the option of dimming if required, all products are tested by our in house testing team prior to despatch.

Please contact us to discuss your project.

The product guide is a selection from our best selling products, we stock a wide range of emergency lighting products please contact us to discuss your specific requirements.

It's easy to be a Light Solution customer!



 Call us on 0113 224 4666

 Email hello@thelightsolution.co.uk

 Visit www.thelightsolution.co.uk