



Downlights

Make sure they aren't a hot topic in your home



In our increasingly design conscious lifestyles, lighting within our homes plays a major part. Whether you choose functional under-shelf lights or grand chandeliers, lighting can have an impact on the overall 'feel' of a home in an instant.

From the vast range of lighting products available, recessed downlights are becoming ever more popular, with millions of them installed in homes across the UK. Over the past few years, lighting manufacturers have radically improved the technology used in downlights to meet the demand for safe, attractive products for the widest range of applications. These new developments in lighting have been made to ensure recessed downlights meet today's tough building regulations, aimed at reducing the risks to homeowners in the unfortunate event of a fire.

If you want to find out how to make sure your downlights will keep you safe in the event of a fire, read on.

Downlights and fire - what you need to know

Since 1987, building regulations have required that habitable structures provide adequate protection to allow safe evacuation in the event of a fire. If your property was built before 1987, the regulations were different and you would not be subject to the same

requirements. While fitting fire-rated downlights into older properties would be of benefit, it is not a legal requirement unless you are undertaking structural renovations or adding an extension.

When your downlights are installed, it goes without saying that you have to cut a hole in the ceiling. Generally this is where the risk lies as fire, smoke and heat will rush through gaps quickly, and surprisingly, collapse of the ceiling is often the biggest threat in the event of a fire. The building regulations are there to ensure that you guarantee all the gaps are fully sealed to maintain the structure and integrity of the ceiling at all times, reducing the risks to you and your property.

While this might sound a bit alarming, it is very straightforward to be fully protected when installing downlights. With so many varieties of downlights, from basic white to highly decorative, there is plenty of choice and it can be a bit of a minefield to choose the right ones. Some downlights are designed with special seals incorporated into them that provide added fire protection;

alternatively a firehood might be used on more conventional types of recessed downlights.

One of the most important things to check is the level of testing that the light fitting has undergone. You should only buy a downlight that has been tested for your specific ceiling*, such as 30, 60 or 90 minute type. These tests should be carried out by the lighting manufacturers using independent assessors, and in short involves constructing a full size room with the particular ceiling type, installing a number of light fittings and creating a fire. In these tests the downlights and ceiling must continue to maintain their integrity for the full duration of the test before a certificate can be issued.



As you can imagine, these tests are extremely expensive to do, therefore some lighting manufacturers don't carry out all three individual tests. It is very important to ensure that the test has been carried out for your particular ceiling construction. Ceilings are constructed in different ways, so it is not safe to assume that if a fitting has been tested for 90 minutes, it is appropriate for both 30 and 60 minute ceilings also.

A good fire-rated downlight should be designed in such a way that the rim will seal against the ceiling, while allowing heat to disperse out of the back of the can through ventilation holes during normal use. It is important that the light fitting runs as coolly as possible and heat is dissipated from the downlight, as this will ensure a good lamp life.

Most fire-rated fittings use intumescent material (material that expands when exposed to heat or flames exceeding a specified temperature) that is designed to seal the downlight against the ceiling and around the ventilation holes. This material is extremely sensitive to high temperatures and in the event of a fire, will generally expand 2-3 times its own width to seal up any reasonable gaps and ventilation holes. This means that the integrity of the ceiling is maintained, and smoke and fire cannot get through so the risk of collapse is minimised.

There are other ways to ensure that your downlights will protect you, for example, using a firehood. A firehood covers the downlight above the ceiling and in the event of a fire, the intumescent material of the hood offers extra protection. So even if your downlight isn't fire-rated, you can still be protected.

Do I need an electrician or can I install them myself?

When installing any downlights, it is important that you use a registered electrician as they will have carried out

the required training to undertake the work to meet the relevant standards. Remember! It's your responsibility as a home owner to ensure that you employ electricians who are fully trained to carry out work to BS7671 2008 IEE Wiring Regulations, the latest standards required.

Fire safety should be a priority for all home owners and the message is to be aware but not unduly alarmed. It is important to only use products that are fully tested and fire-rated, using electricians who are fully registered, enabling them to advise you of the different products available to meet the regulations and keep any risks to a minimum.

For example and guidance only:

30 minute ceilings - typical application type is a 2 storey house (detached or terrace), flat or maisonette

60 minute ceilings - typical application is between a shop and flat above, houses and flats between 5m -10m above ground and multiple occupancy dwellings.

90 minute ceilings - typical application is for basements with a depth greater than 10m or flats over 30m above ground.



For more information on fire-rated downlights visit:
www.jcc-lighting.co.uk.

For more information on fire safety visit:
www.electricalsafetycouncil.org.uk.

For more information on building regulations visit:
www.planningportal.gov.uk

JCC Head Office:

Lamplighter House • Beeding Close • Southern Cross Trading Estate • Bognor Regis • West Sussex • PO22 9TS
Additional offices in Belfast, Dubai, Hong Kong, China & Italy
e: sales@jcc-lighting.co.uk • www.jcc-lighting.co.uk • ©2008 JCC Lighting Ltd