



Fire rated downlights enable Building Regulations compliance

CONSTRUCTION PROJECTS TODAY MUST COMPLY WITH MANY REQUIREMENTS. AMONG THEM ARE BUILDING REGULATIONS REGARDING FIRE RESISTANCE, THE FLOW OF AIR AND MOISTURE, ENERGY CONSERVATION AND ACOUSTICS. AURORA U.K. TECHNICAL DIRECTOR PETE HART EXPLAINS HOW THE LATEST RECESSED DOWNLIGHTS CAN HELP SPECIFIERS ACHIEVE COMPLIANCE.

Ceiling mounted recessed downlights are widely used in retail, commercial and public buildings, as well as homes. They are available in a wide range of designs incorporating halogen, compact fluorescent (CFL) or LED lamp types. All need holes to be cut in ceilings for mounting purposes.

Until recently, the necessary holes were cut with little thought about their impact on the ceiling, the void above and the room above that. Today, there is increasing emphasis on safety, sound transmission and cutting CO₂ emissions and energy bills, and current Building Regulations address these issues. Building Regulation Part B ensures that residential and workplace ceilings provide an effective barrier to fire spread; fire rated downlights ensure that the ceiling remains an effective barrier to spread of flame.

Ceilings with apertures for recessed downlights should also comply with Building Regulations Parts C and E, referring to air, moisture and sound transmission. Choosing a suitable downlight helps to ensure that the

building complies with Building Regulations and the National House Building Council (NHBC) standards. Until now, fire rated downlights have addressed the acoustics, moisture and fire issues, but the uninterrupted insulation requirement presented a new challenge. All lamps produce heat, and if the downlight is insulation covered, the resulting heat build-up can reduce lamp life, cause warping and also result in discolouration of downlight and adjacent ceiling.

A highly flexible answer

Aurora Lighting's fire-rated SOLA downlight range overcomes such problems with an integrated intumescent (carbon polymer matrix) material that expands in a fire, closing off flame spread paths and sealing downlight and cutout. Fire barrier integrity is maintained, so Aurora's latest downlights can be used in 30, 60 and 90 minute ceilings, helping meet Part B requirements. A unique innovation is the integrated heatsink that allows the downlights to be covered with thermal insulation - no guards are needed. Aurora's

CFL and halogen SOLA products use a radially-finned heatsink, while the LED variant uses an integral guard that maintains space between downlight and insulation, so that heat can dissipate. Compliance with Building Regulations Parts L1 A/B is achieved without having to use a separate loft brace to hold the insulation away from the fixture.

While full insulation also helps maintain sound resistance, the downlights have been tested to acoustic standards BS EN ISO 140-3 1995 and BS EN ISO 140-6 1998, confirming that they maintain the acoustic integrity of the ceiling. They therefore also comply with Building Regulation Part E. No other manufacturer, it is thought, offers so much flexibility. Aurora's SOLA downlights can be installed from below the ceiling without the insulation being disturbed. This is ideal for those who want to be sure they have not compromised relevant building regulations and who need to get the job done quickly.

Aurora

Enquiry ??

