

**JCC**

Lighting for **today**, designs for **tomorrow**



# **FIREGUARD** **PLUS**



**The Next Generation**  
of Fire-rated LED Downlights...

The new **Fireguard Plus** range from JCC brings together many years of **tried and tested technology**, combined with the **latest innovations in intumescent material**, to deliver a brand new fire-rated downlight to the market.

## New Technology

Developing the core aspects of the popular Fireguard range, Fireguard Plus moves fire-rated downlight design another step further. The key is a new thermo plastic intumescent plug, which has a unique, patented design and forms a significant part of this range. The new plug reacts strongly to high temperatures and expands up to eighty times without constraint. When subjected to high temperatures (428°F /220°C and above) the material swells to a solid, dense mass, sealing the back of the can to prevent heat and flames from passing into the ceiling void. Fireguard Plus has been tested to ensure that it passes the tests for all three ceiling types (30, 60 & 90) and conforms to part B of the England and Wales building regulations.

## Thermal Management

It is a dichotomy that heating intumescent material to high temperatures makes it volatile and extremely expandable. Yet engineers at JCC have been able to design an intumescent material that can be heated to high temperature and then shot through an injection moulding machine tool. This is what we at JCC call 'Intumescent Thermo Plastic Technology'. The injection moulded plug is manufactured to exact specifications meaning that it makes for a very robust fit into the top of the can, further aiding the seal in the event of a fire. The addition of cleverly designed and patented 'petal' cut-out vents in the plug enables optimal thermal management of the fitting throughout its life and ensures unsurpassed performance.

High quality silicon seal for compliance with Part C of the England and Wales Building Regulations



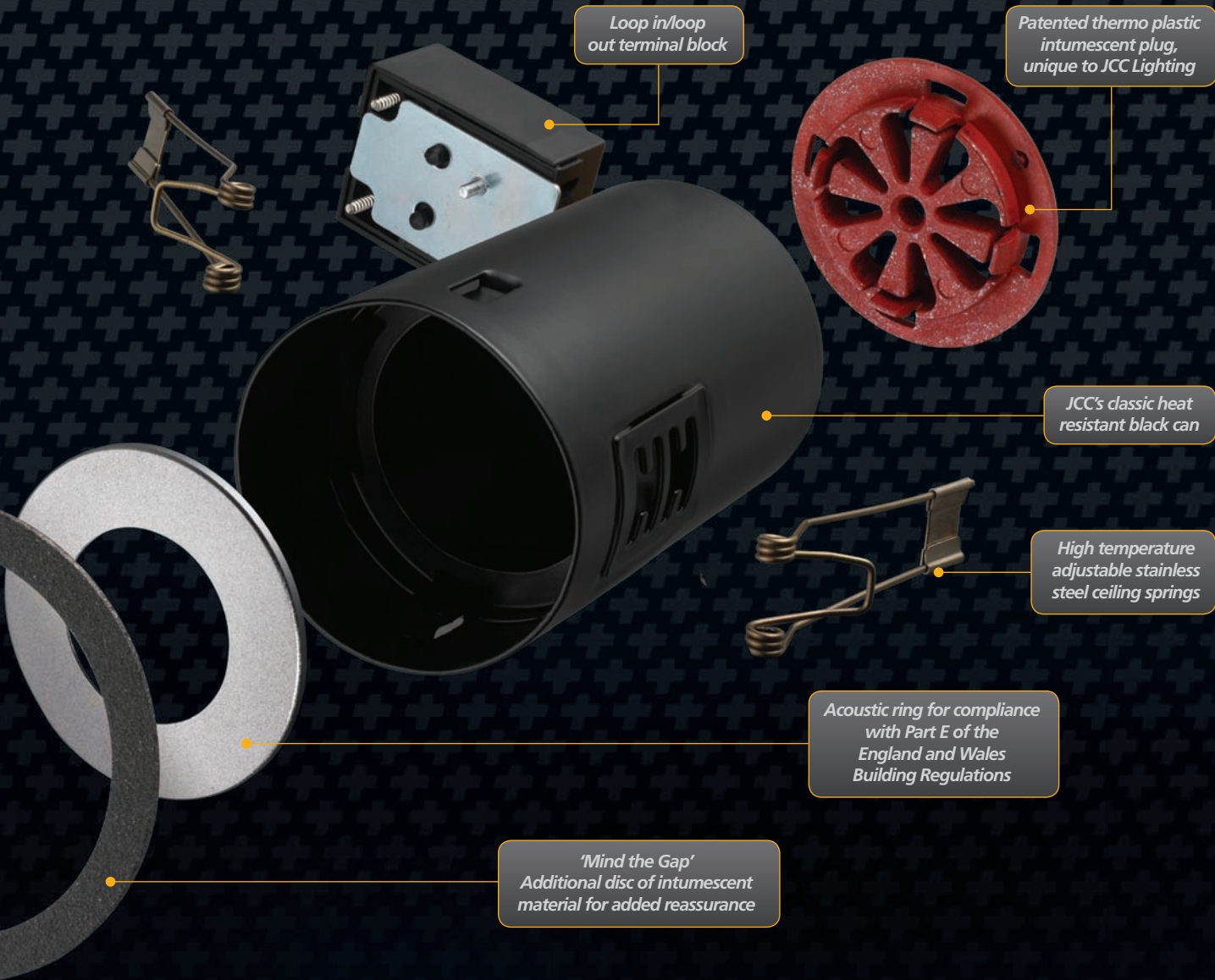
LED light source uniquely integrated with E



Exceptionally low energy integrated 5W (4.7W) LED light source, providing up to 90% energy savings. 45 lumens per circuit Watt

# FIREGUARD PLUS





## Low Energy Light Source

The first two fittings in the Fireguard Plus family have been developed with an integral LED light source and are available as either a standard downlight or an IP65 rated showerlight. The LED light source is 90% more energy efficient than a 50W halogen downlight and the 3000K colour temperature and 40° beam angle makes Fireguard Plus perfect for any domestic application. At over 35,000 hours life this product is truly fit and forget, bringing installation and re-lamping costs down over the life of the product and, at 45 lumens per circuit Watt, passes the revised England and Wales building regulations part L.

## Installation

Installation couldn't be easier as Fireguard Plus does not require a separate driver and can be wired straight into the mains. All the design features that the industry has come to expect of Fireguard are included in this new range including a loop in/loop out terminal block that will accept up to 1.5mm<sup>2</sup> cable, high temperature adjustable stainless steel ceiling springs, which ensure that the fittings can be installed in most fire-rated ceiling constructions and the classic mild steel can design. In addition, the acoustic ring maintains the seal around the front of the fitting for compliance with England and Wales building regulations part E (acoustic standard) and part C (moisture protection).

*...truly the next generation  
of fire-rated LED downlights.*

... developed  
conjunction  
Edison

ISON

# 5W LED Fire-rated Downlights



- + Patented thermo plastic intumescent plug with superior convection design and high thermal dynamics
- + 'A' rated for energy efficiency
- + 45 lumens per circuit Watt in accordance with the proposed new England and Wales building regulations (Part L)
- + Standard & IP65 showerlight versions available
- + Integrated 5W (4.7W) LED light source developed uniquely in conjunction with Edison
- + Integral driver
- + 90% energy savings against a 50W halogen equivalent
- + Fit & forget design to minimise installation costs
- + 3000K white, CRI:Ra (80)
- + 35,000 hours average life
- + Mains voltage (220-240V)
- + Loop in/loop out terminal block will accept up to 1.5mm<sup>2</sup> cable
- + Fire-rated in accordance with England and Wales building regulations part B - fully tested for 30,60 & 90 minute ceilings
- + Additional intumescent ring around the inside of the bezel for added reassurance in event of a fire
- + High temperature adjustable stainless steel ceiling springs ensure that the fittings can be installed in most fire-rated ceiling constructions
- + Classic mild steel can design
- + Acoustic ring maintains the seal around the front of the fitting for compliance with England and Wales building regulations part E (acoustic standard) and part C (moisture protection)
- + Small size ideal for shallow voids
- + Although suitable for use with most mineral wool insulation covering the top of the can, for optimal performance allow a 15mm air gap around the fitting
- + Available in brushed nickel, chrome and white



## Cost of Ownership

Wattage	Lamp Type	Kw	Input Operational Hours*	Kwh	Cost of Energy per Kwh (Pence)**	Monthly Cost (Pence)	Cost for month (£)	CO2 Content Kg	No. of Fittings	Total Monthly Cost (£)
50	Halogen	0.05	180	9	9.095	81.855	0.81855	3.6	10	8.19
5	LED	0.005	180	0.9	9.095	8.1855	0.081855	0.36	10	0.82

\* Based on six hours usage per day/30 days in a month\*\* Based on an average taken across six different providers May10

## Saved Maintenance Costs

Lamp Type	Average Life (hrs)	Length Of Service (hrs)	No. of Relamps/ Luminaire change	No. Fittings	Typical Labour Costs (£)*	Average Unit Cost of Lamp/ Luminaire (£)	Total Cost (£)	Saving (%)
Halogen	2,500	70,000	28	10	16.66	1.00	4,674.80	
LED	35,000	70,000	1	10	10.00	35.00	450.00	96%

\* Based on an hourly labour rate of £20 per lamp / per relamping exercise on an installation of 10 fittings at 5 mins per lamp

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