

Case Study

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Royal & SunAlliance Bristol, UK

Grade II Listed Building Lights Up with Luxeon

The Royal & SunAlliance building is lighting up the night sky in Bristol with a high-impact exterior architectural lighting scheme.

Background

Royal & SunAlliance is one of the world's largest multinational quoted insurance groups, with operations in the UK, Scandinavia, Canada, Ireland, the Middle East and Latin America.

Its Grade II listed West Gate building in Bristol was designed by renowned British architect Sir Giles Gilbert Scott—whose work included national landmarks such as the Battersea & Bankside Power Stations, Liverpool's Anglican Cathedral and the classic red British telephone box—creating a building of significant importance within the city. Construction of the building started in 1937 and was finally completed in 1941, before it officially opened for commercial use in 1950. The Electricity Board occupied the building for many years, until in 1991 it was comprehensively refurbished, renamed "West Gate" and occupied by Royal Insurance (now Royal & SunAlliance).

Requirements

Royal & SunAlliance was keen to stamp its own lasting identity on the West Gate building. To achieve this, the company wanted to create an innovative and high quality scheme to reinforce West Gate as a prominent city centre landmark for the 21st century. A key challenge was that the "Listed" status of the building meant no signage could be attached to the exterior.

Key Benefits and Features of the Luxeon Based System

- Long lamp life—50,000 hours
- Deep saturated colours
- Low energy consumption—30 Watts/m
- Fully DMX addressable
- Low profile design
- Wide angle even illumination
- IP68 options
- Simple plug & play installation
- Standard modular lengths
- Adjustable mounting brackets
- Low voltage operation
- Optimized thermal management



As a result Royal & SunAlliance looked to focus on the future and embrace new technology to achieve the impact and brand presence it required. External lighting was identified as the key element, with the brief to create an inventive design that would add local interest and give the building a new nocturnal presence compatible with the City Council's desire to improve the visual impact of lighting in the centre.

The Lighting Solution

Initially specified with a metal halide lamp source, in the two and a half years between the lighting scheme being designed and going to tender, James Thomas' Luxeon-based PixelPAR 90 had been launched on the market. This fixture was identified as a far superior solution with the added advantage of being physically more discreet and the ability to create lighting results that were never before possible.

To meet the requirements of the project, twelve James Thomas PixelPAR 90 LED fixtures were specified to create a high-impact scheme for the building. The PixelPAR 90 is a completely self-contained lighting fixture using 90 Luxeon emitters, 30 each of red, green and blue, collimated to provide a six-degree beam angle. The larger surface area of the LEDs makes the PixelPAR 90 ideal for all types of wide illumination applications that require versatile wash fixtures, with the Luxeon technology used to create a colour changing luminaire with a light output of up to 2,430 lumens at one metre and 175 lumens at over ten metres.

The 12 fully-weatherised fixtures are mounted on a ledge around the bottom of the West Gate's curved front fascia, and beam upwards to produce a fabulously smooth, rich and even coverage. The fascia width is approximately 100ft and the curve is 120 degrees. The fixtures are programmed to step through a colour-changing sequence of green, yellow and blue—Royal & SunAlliance's corporate colours—creating an eye-catching display for the company brand and the city. The PixelPARs are run via a LightProcessor Replica replay unit, programmed via a QCommander desk, with the solution maintained on site by the company's Facilities Manager. For special occasions the building is changed into specific colour schemes e.g. red for Remembrance Day or rainbow colours for Christmas. The lighting can also be used to highlight special promotions.

The LED Advantage

The small size and long life of the Luxeon light sources enabled James Thomas to develop PixelPAR 90 into a solution that eliminates the need to change bulbs and allows minimal maintenance. The PixelPAR 90 utilises the Luxeon's low energy requirements to achieve a rating of only 90 Watts, drawing an extremely low amount of power for the intense brightness it emits.

The low power consumption means that Royal & SunAlliance can not only save money on long-term everyday running costs and be more environmentally friendly, but that the electrical plant installation - power and cabling - could be scaled right down. The power supply was accordingly reduced from a 62 Amp 3-phase to two single 16 Amp feeds.

The colour flexibility of Luxeon also allows the PixelPAR 90 to create a maximum of between 16 million and 6.8 billion colour permutations (dependent on 3 or 6 channel control), providing lighting designers with the basis for more creative, flexible lighting effects.

The Results

Through the use of creative lighting, West Gate has been transformed into one of Bristol's landmarks. The design also works to effectively highlight the unusual curved fascia of this historic building, while stamping Royal & SunAlliance's own modern identity on the building. Royal & SunAlliance has received regular positive feedback from passers by on the lighting of the building, and it has attracted strong praise from the local community.

Richard McDonough, Facilities Manager at Royal & SunAlliance commented, "We are very impressed with the increased profile this project has delivered for our prestigious West Gate premises. The lighting adds to the atmosphere of the centre of Bristol and firmly establishes our building as a key local landmark."