



AAMI Park

– fever pitch lighting control solution for AAMI Park

The iconic \$268 million AAMI Park, Melbourne's first purpose-built rectangular pitch stadium, is the latest addition to the city's elite sport and entertainment precinct.

Home to Melbourne Victory and Melbourne Heart soccer teams, the Melbourne Storm rugby league team and the Melbourne Rebels Super 15 rugby union team, the 31,000-seat stadium incorporates the latest environmentally efficient features including maximum natural ventilation and light, low water use fittings, rainwater collection from the roof and the use of low energy light fittings.

However, the real standout feature of the stadium is the eye-catching lightweight bio-frame roof that provides extensive

seating coverage, excellent spectator lines and an impressive ever-changing light show.

Illuminating the world-class stadium demanded a sophisticated lighting control system that would complement the energy saving design features of the park and ensure the appropriate lighting levels for both players and spectators.

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Client requirements

With its world class playing surface it was important that lighting levels on the playing field met broadcaster demands.

Additionally, it was important that the lighting control system be fail proof. The client needed to be confident that everything would work flawlessly and that in the event of a problem, there would be a backup system.

Philip Dyalite's ability to incorporate a dual redundant backbone into the pitch illumination system to mitigate any system failure – the only system capable of supporting this requirement – was a key factor in the selection of the technology.

“ Incorporated into the pitch illumination system is a dual redundant backbone to mitigate any system failure. ”



The Philips Dyalite solution

Lighting AAMI Park required careful planning and the most sophisticated light control equipment to ensure suitable lighting throughout the public and corporate areas as well providing international pitch illumination.

The Philips Dyalite lighting control system has complete control of all stadium and function lighting within the venue and also complements the energy-efficient design of the stadium.

One central control

The fully integrated control system, supplied by Philips Dyalite's key regional VAR, Lightmoves, not only provides a centrally located, computerised lighting control system but also integrates seamlessly with third-party applications such as building management services and audio-visual equipment for the corporate spaces.

The controlled lighting consists of four light towers and banks of lights attached to the canopy – providing international sporting broadcast illumination for the pitch – and energy-efficient luminaires throughout the internal and external public areas as well as the tenancy, corporate and retail spaces within the stadium.

Adding complexity to the lighting control project was building in the capacity for a dynamic lighting system on the roof.

Specialist lighting company Electrolight was awarded the \$1 million contract to design an artistic dynamic lighting system for the roof façade.

A custom solution for every scenario

Working in collaboration with local Melbourne companies Lightmoves and Space Cannon Australia, a custom-designed and built luminaire was developed.

The lighting system operates with specific sequences designed for event and non-event nights. Accomplished artists Alexander Knox and Bruce Ramus have each contributed a number of sequences such as Game Day, Team Colours, Resting and Festival modes.

The system uses environmentally friendly LEDs, which use around one tenth of the power required to floodlight the stadium without any light spill into the surrounding area.

Products and technology used

A powerful centralised control system monitors and adjusts the lighting for the entire stadium. In addition, the centralised control is flexible and easy to program for different events.

But it's the solution for the rooftop lighting system that really shines. The system, a Pixel P9, contains nine Philips Luxeon Rebel LEDs, three of each primary colour.

The Pixel P9 has a shallow profile and is very bright, but its main advantage is its domed diffuser lens, which transmits light in all directions and reduces light pollution.

Careful design and planning

The brackets and luminaires were designed to be easily attached to the roof and connected to the network. A fixture was attached at every intersection of each triangular panel forming the roof structure resulting in 1544 individually addressable LED lights across the stadium roof.

The 1544 colour-changing and weatherproof LED fittings act like a low resolution video screen and are controlled by video content that was especially commissioned by the artists.

Intelligent control

A simple control widget, which triggers the specially commissioned video content, controls the LED system in the stadium's central control room. The control room is connected to plant rooms located in all four corners of the stadium, which each contain an Enttec Datagate II as well as a number of Enttec RD88 RDM data splitters.

One of the added features within the light assembly is a number of special sensors that report the fitting's current operating temperature back to the central control computer. If the outside temperature exceeds 50°C, the LEDs reduce output as a protective mechanism and turn off automatically if temperatures continue to rise.

Great design overcomes challenges

Installing the lighting on the roof was something of a challenge because of the different sized triangles in each shell and the varying distance to each LED – each LED fitting has a 200mm cable and a moulded plug and socket on each end so that the units plug into each other. Some 148 vertical runs of LEDs form the basis of the daisy chain with each run having a feeder cable, 24V power supply and a dedicated DMX.



The DNG485 Network Gateway, allows for simple integration between DyNet and DMX.

“ The 1544 colour-changing LED fittings act like a low resolution video screen. ”

Key client benefits

The Philips Dynalite advanced control system has contributed to the successful implementation of the complex lighting project for AAMI Park.

It has ensured suitable lighting for every area of the stadium and has helped to put the spotlight on AAMI Park as an award-winning sporting complex.

Importantly, the system is user-friendly and can be controlled with a click of a mouse.

The spectacular rooftop lighting system lights up the city skyline nightly and strengthens AAMI Park's standing as an iconic Melbourne venue.



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