LED Tennis Court Lighting

This Melbourne residence enjoys the benefits of LED floodlighting

CASE STUDY

Historically, lighting for outdoor tennis courts required metal halide systems because of the high light levels required for effective play, as stipulated by Tennis Australia. The owner of this newly constructed court in Melbourne was looking for a more innovative option and chose LED floodlights by Aglo Systems.

LED vs Metal Halide Floodlighting

Versus traditional 1000W metal halides fixtures, Aglo's LED floodlights reduce the electrical load by more than 50%. The four pole lighting system was designed to provide vivid illumination with uniform levels across the entire playing surface. Highly efficient and well-designed optical components are key to enabling high performance sports lighting systems. The rotating and tiling action of the mount and 60°x60° beam angle of the fitting help to maintain good contrast ratios, reduce glare, provide adequate and uniform illumination and avoid excessive shadowing. It also eliminates light spill to neighbouring homes surrounding the court. This is especially important for any residential sports lighting.

Aglo Systems ELSCO Palida 200W floodlight

Tennis court at twilight

Tennis court at dusk

LED Solution

Aglo Systems developed the required lighting design and proposed eight units of the Palida 200W fitting with a 60°x60° beam angle. The lighting standard category for this project was determined with reference and assumptions to Australian Standard 2560.2.1-200 – Lighting for Domestic Outdoor Tennis Courts.

Benefits of LED

The LED system will provide years of maintenance free operation with little lumen reduction over the life of the product. LED lights will also operate at full brightness immediately after being switched on, as opposed to the gradual warm-up required for metal halide lights, which could take up to 15 minutes. Additionally, while metal halide technology operated with a consistent ambient buzz, LED technology operates almost completely silently.

Conclusion

The final result is a compact flood light system of uniform illumination which is less visually obtrusive than metal halide units, has instantaneous maximum light output, silent operation and significantly less energy usage.

PROJECT SUMMARY	
Type of Fitting	ELSCO Palida 200W
Beam Angle	60° x 60°
Quantity	8
Poles	4
Average Lux	332lx
Uniformity	0.550
Product Warranty	5 years

SAVINGS of LED vs equivalent Metal Halide	
Total Energy Savings (Kwh/Year)	6,864 kWh p.a.
Maximum Demand Reduction	5.28 kW
Green House Gas Emission Reduction	7.33 CO_2e p.a.
Assumptions: Hours of Operation: 25 hours a week, on average	

"Working with Aglo Systems for my tennis court lighting install was a breeze. They provided me with a proposal of the lighting design based on the Australian Standard and gave me a full comparison of the energy savings, longevity and maintenance differences between LED and metal halide. Now my family can play at all times of the day without bothering the neighbours and we don't need to think ahead to turn on the lights before we want to actually start."

Stuart Giese, Home Owner.

The ELSCO Palida 200W floodlight is available in 90W - 1000W