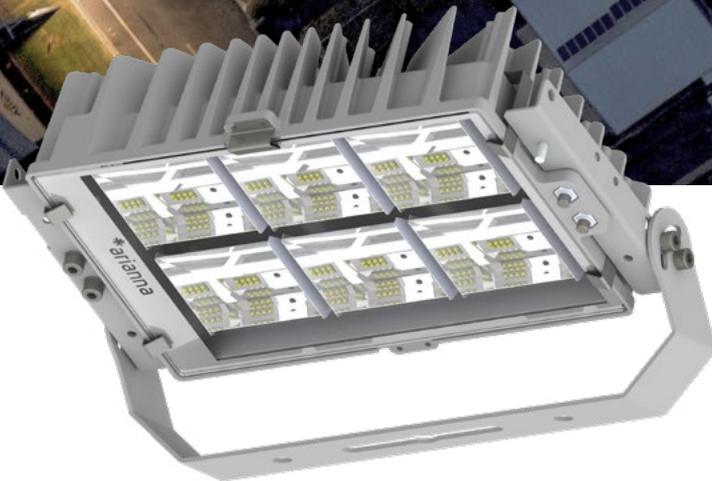




YARRAM SWIMMING POOL

**POOLSIDE
PERFECTION**



A Warmer Pool For Yarram

Yarram's outdoor swimming pool recently underwent a \$1 million redevelopment to provide the local community with increased access to the facility during the warmer months of the year. Advanced Lighting Technologies supplied the flexible, modular **Arianna Petrarca LED Floodlight** as part of the upgrade.



LOCATION

YARRAM, VIC

CUSTOMER

SHADE N SAILS

END USER

THE YARRAM COMMUNITY

ELECTRICAL CONTRACTOR

LV ELECTRICAL & MAINTENANCE
& TARRAELECTRIC

The Facility

Situated in Southeast Gippsland in Regional Victoria, Yarram is a small farming town with a vibrant and active community. Residents had long campaigned for enhancements to be made to the local swimming pool to allow for greater access during both peak and off-peak times.

A partnership spanning all levels of government and a contribution from the local Rotary Club ensured the project to deliver these improvements came to life - the existing pool was upgraded to include an impressive over-pool structure, café-style side blinds and electric pumps to keep the water at a warm 29 degrees Celsius. New energy efficient LED lighting was also installed, while photovoltaic (PV) solar cells were fitted to supplement and offset the resulting increase in power consumption.

“Yarram Swimming Pool functions as a vital hub for recreation, fitness and social interaction. It also serves as an invaluable local resource for teaching essential swimming skills, promoting water safety, and potentially saving lives.

Spokesperson, Wellington Shire Council



SHADE 'N' SAILS

Project images used with courtesy of Shade N Sails.

shadensails.com.au

Requirements & Challenges

Meeting the requirements set out in Australian Standard 2560.2.5 is essential when lighting a public swimming pool. Instructors and supervisors need to be able to see the entire pool and every swimmer in it. An appropriate lighting solution that generates the brightness and uniformity recommended by the Standard is critical.

Glare also needs to be minimised - not only to ensure a comfortable and pleasant visual experience for pool users, but also to ensure the vision of safety instructors isn't obstructed at any time.

Designing a lighting solution for a swimming pool is somewhat unique due to an issue known as veiling reflection, which can reduce the visibility of those above the water's surface looking in. Such an effect could have catastrophic consequences in a life-saving situation where every second is critical.

To avoid veiling reflections and maintain adequate visibility into the water, the average luminance of the water surface should closely match that of the pool lining. This is achieved by controlling these three factors:

- a) Keeping reflected light levels low.
- b) Keeping penetrative light levels high.
- c) Keeping the pool lining reflectance values high.

Selecting a luminaire that is fit for purpose in aquatic environments is also crucial - quality and reliability are paramount. Any proposed lighting solution should offer high ingress protection to better withstand prolonged exposure to water and moisture.

Luminaire placement and ease of access for future maintenance also needs to be considered during the lighting design process. Hiring special access equipment to repair or replace a faulty luminaire suspended over a swimming pool can be costly.

Finally, as with all responsible outdoor lighting installations, any obtrusive light should also be minimised to ensure neighbouring properties, passing motorists or local flora and fauna aren't affected.



The current **Australian Standard** recommends the following average maintained lux levels for swimming pools:

150
LUX

Recreation, training
& low-level local
competition.

300
LUX

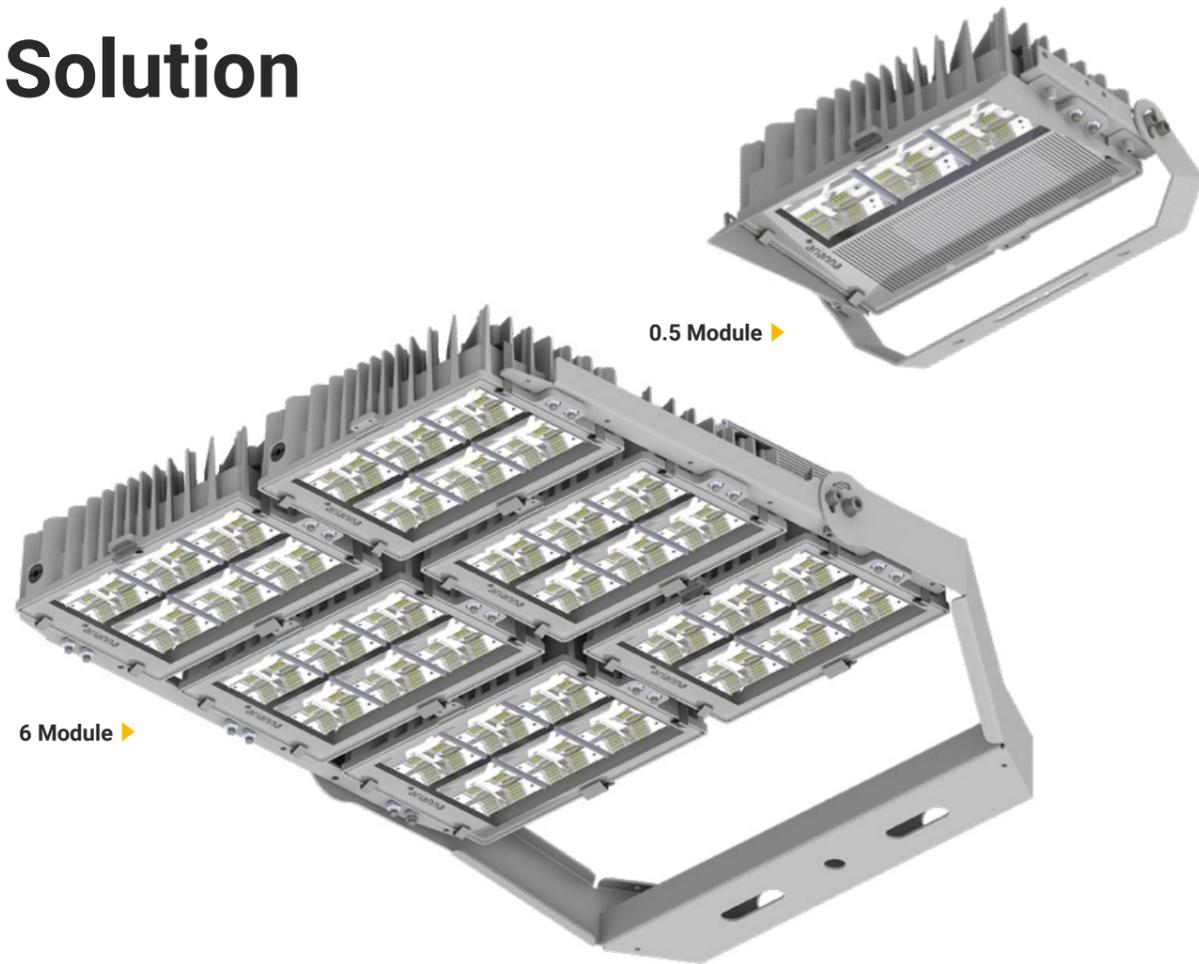
Club, interclub
or district
competition

600
LUX

National
or state
competition



Solution



The Arianna Petrarca LED Floodlight is a flexible and modular area lighting solution capable of delivering up to 180,000 lumens through patented reflection optics that offer high efficiency, uniformity and visual comfort.

Benefits

- 1 MODULARITY (1/2 MODULE TO 6 MODULES)
- 2 PATENTED OPTICS DESIGNED TO MAXIMISE PERFORMANCE
- 3 LOW GLARE / HIGH VISUAL COMFORT

Petrarca 2.0

NEW

NOTE: The variant of the Arianna Petrarca supplied at Yarram Swimming Pool has been superseded by the Petrarca 2.0.

All product images, features and technical information included in this case study relate to the Arianna Petrarca 2.0.

Petrarca

SPORTS FLOODLIGHT

Although perfectly suited for use in any large, open-area lighting application, the Arianna Petrarca really shines in sporting applications - generating comfortable, even light distribution with minimal glare to provide an enjoyable experience for both participants and spectators.

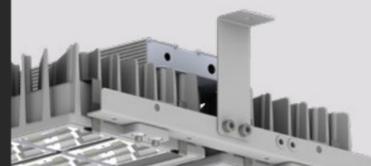
Whether it's a swimming pool or a larger sports field, the Arianna Petrarca offers a cost-effective, energy-efficient modern LED sports lighting solution.

“The Petrarca’s combination of modularity, performance and optical range is a winning formula, particularly for sporting applications. We were pleased to offer a solution that met the project’s technical requirements.

Advanced Lighting Technologies’ Technical Sales Representative Avi de Silva worked on the project and commended the Arianna Petrarca.

LUMENS	10,000L - 181,000L
WATTAGE	70W - 1390W
CCT	3000K 4000K 5700K
CRI	70 CRI 80 CRI 90 CRI
RATINGS	IP66 IK08
OPTICS	NARROW WIDE ASYMMETRIC FLOOD
OPTIONS	NEMA DALI
WARRANTY	5 YEARS
TOLERANCE	-30° TO +50°C
COLOURS	<input checked="" type="radio"/> N <input type="radio"/> G
HIGHLIGHT	REMOTE CONTROL GEAR OPTIONAL

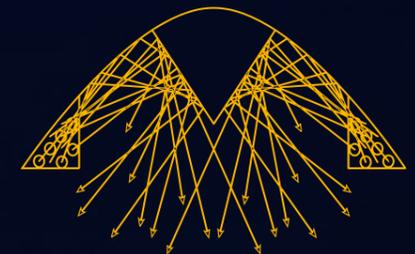
NEW FIXED BRACKET FOR SMALL MODULE VARIANTS.



Arianna's Reflection Expertise

Arianna's internationally recognised total reflection patent is a technological innovation that borrows from astronomy. The system uses a reflector inside the luminaire to collect rays of light and direct them evenly onto the ground.

The LEDs are concealed from view, resulting in low glare and improved energy efficiency. Arianna have integrated the principles of total reflection in their innovative luminaires, providing targeted solutions for different lighting needs.



Petrarca's Innovative Technology

The DEFLECTIVE reflection system found in the Petrarca captures and blends the emitted light through the initial optical assembly, then uses a second assembly to cast it uniformly. This ensures the Petrarca delivers high visual comfort and uniformity, without creating dark spots or glare.



Results

The Arianna Petrarca's revolutionary reflection system offers a low glare and efficient approach to swimming pool illumination.

The LEDs are concealed within the luminaire, and light is captured and combined through a series of reflectors before being cast across the water uniformly. This results in every stroke from every swimmer being clear and visible, ensuring lifeguards and instructors can safely monitor all users from the pool's surrounds.

Offering flexibility to suit any sporting application, the Petrarca was supplied as a single module at Yarram, with each luminaire generating up to 25,000 lumens to achieve a maintained average horizontal illuminance of 180 lux, comfortably surpassing the light levels recommended for recreation and training by AS2560.2.5.

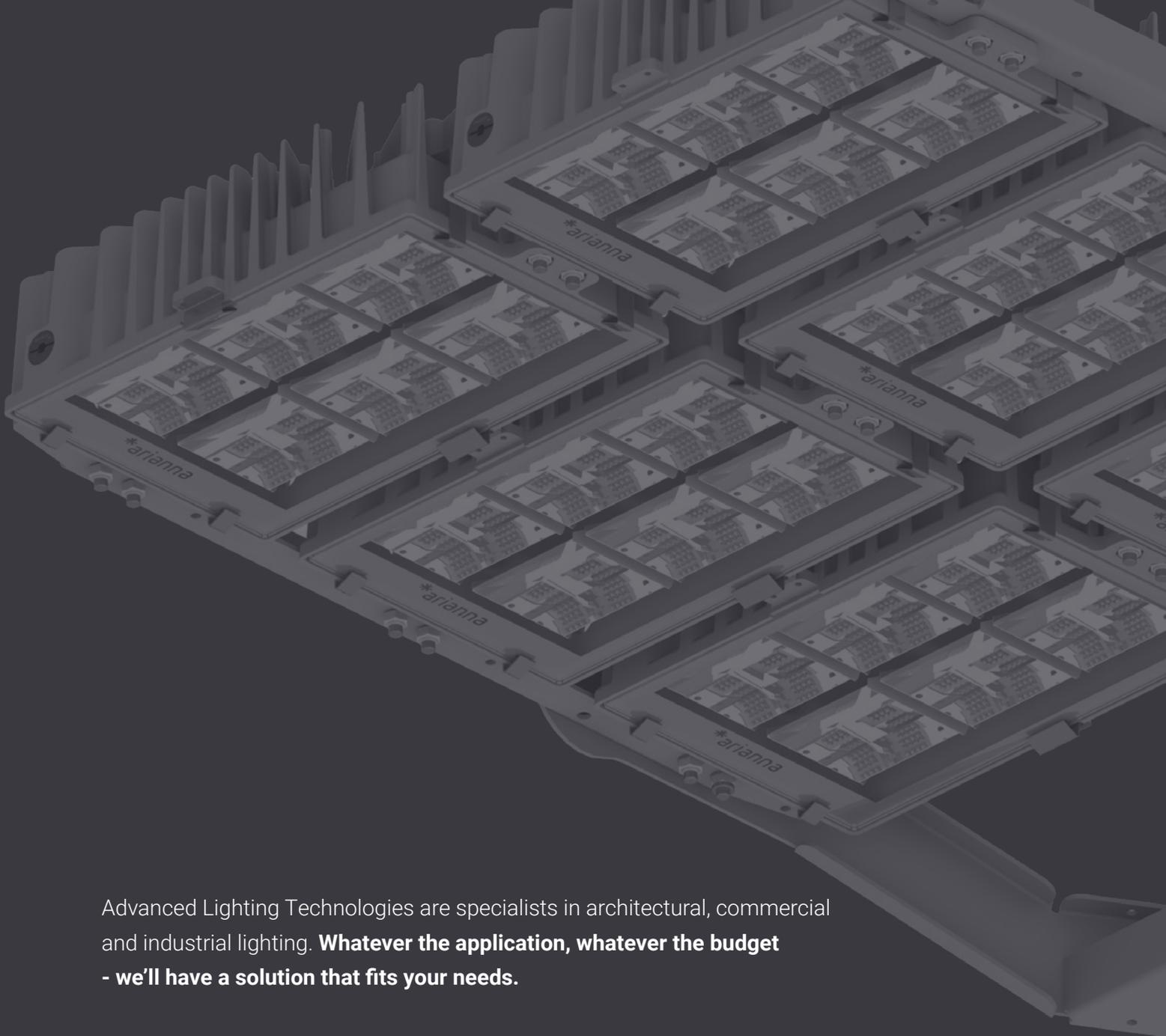
Particular care was taken during the design phase to avoid veiling reflections, ensuring acceptable visibility into the water.

Thanks to Arianna's innovative full cut-off optical system, light is only directed where necessary and without waste, with zero light emitted upwards. The Petrarca's low glare approach ensures minimal disturbance to neighbours and passing drivers, while it's optimised thermal design, high ingress protection (IP66) and 5-year warranty means the Yarram Swimming Pool will continue to receive high quality illumination for years to come.



“ The improvements allow Council's Leisure Services team to offer greater aquatic programming and increased access to better meet the needs of local residents. We thank the Yarram community for their long-term advocacy and support of this project.

SPOKESPERSON, WELLINGTON SHIRE COUNCIL



Advanced Lighting Technologies are specialists in architectural, commercial and industrial lighting. **Whatever the application, whatever the budget - we'll have a solution that fits your needs.**



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