

Capability
Statement.



#### **Environmental vision statement.**

Ark Lighting products stand out from the competition in multiple aspects. Here are the key reasons why:

Innovation and Technology

Design and Aesthetics

Customisation and Flexibility

Warranty

Future Planning and Sustainability / Plastic Free Packaging

Capability

Key Staff



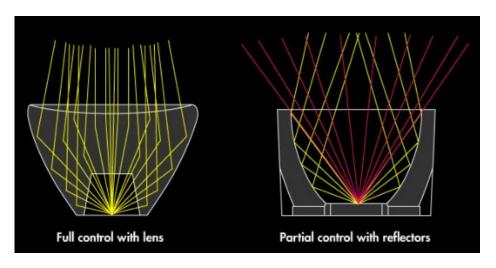
# Innovation and Technology.

We stay at the forefront of lighting innovation, constantly researching and communicating with our manufacturers to push the boundaries of possibilities.

Our latest offering is a Zeus Artificial Intelligent track spot which changes temperature output to best reflect the optimal colour of the retail product. The 2<sup>nd</sup> generation version of this light has a traffic counter to provide data to our client on how often a product or area of their store is visited.

All our products come with a CRI90+ Rating. This is important as the CRI (Colour Rendering Index) is the measure of how accurately a light source reproduces the colour of an object. As natural light gives a perfect CRI rating of 100, lighting manufacturers aim for a rating as close to 100 as possible. As LED sources produce light in a very different way to the sun, ratings of 90+ are considered to be in the top-of-the-range level and is very desirable for retail lighting.

Rather than relying on conventional reflects, our lighting products incorporate the use of lenses. Lenses offer distinct advantages in light distribution and control. They provide precise beam angles, allowing for targeted lighting and highlighting specific area or objects. Lenses also help minimise glare and light spillage, providing better control over the direction of light. Additionally, lenses offer enhanced efficiency by maximising light output and minimising light loss compare to traditional reflectors. This ensures that our lighting products deliver optimal performance and energy efficiency.



# Design and Aesthetics.

Our generation 2 Sirius track spot has a track adaptor which is separated from the fittings, HOWEVER, it is almost completely concealed, offering seamless integration with the track system, providing a cohesive and unobtrusive appearance.

This configuration, as opposed to an integrated track adaptor, provides a huge advantage by extending the lifetime of the fitting where the driver is separated from the heat generating LED chip. Our Drivers are also video and photography friendly as they are flicker free.



ARK Sustainability Profile

# Customisation and Flexibility.

Warranty.

We provide a wide range of options in terms of colour temperature, beam angles, dimming capabilities and mounting options. Rather than relying on conventional reflects, our lighting products incorporate the use of lenses. Lenses offer distinct advantages in light distribution and control. They provide precise beam angles, allowing for targeted lighting and highlighting specific area or objects. Lenses also help minimise glare and light spillage, providing better control over the direction of light. Additionally, lenses offer enhanced efficiency by maximising light output and minimising light loss compare to traditional reflectors. This ensures that our lighting products deliver optimal performance and energy efficiency.

# Future Planning and Sustainability.

We have established a maintenance program for LED fittings that have reached the end of their original life.

This program involves refurbishing old LED luminaires with LED chips and drivers, regardless of the OEM. The benefits of this are a realised cost saving, promoting environmental sustainability through diversion from landfill, preserving aesthetics and extending product lifespan.

At this stage we are refurbishing on a small scale but plan to implement a tailored program on a larger scale.

Please refer to our Sustainability profile for more on our sustainability initiatives.

PLASTIC FREE PACKAGING











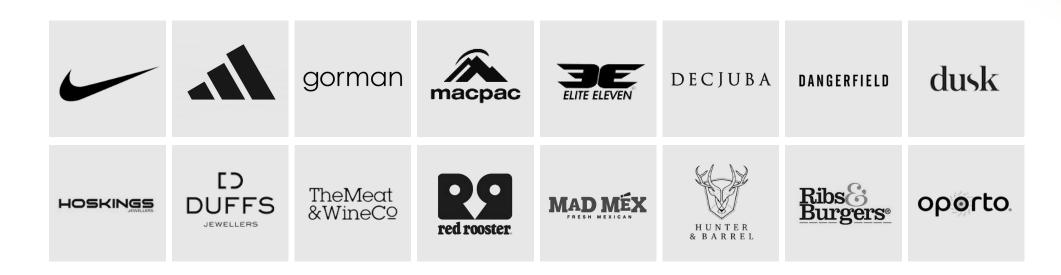


ARK

# Capability.

Ark Lighting have an extensive and diverse range of projects in their portfolio in all locations in Australia and New Zealand. We also have reliable options for international logistics and can supply worldwide, while ensuring compliance to local market regulations.

Major brands we've worked with:



#### Our Staff.

We have a tight knit and very experienced team whose primary drive is delivering the best result possible for our clients.

Through effective communication and a strong focus on providing solutions we have forged solid, long-term relationships with many clients. We also pride ourselves on taking a common-sense approach to workflow to ensure work is delivered in an efficient manner with no unnecessary hold ups. Ark Lighting will designate two specific team members who will look after lighting design and, supply respectively so you will always know who to contact should the need arise.

Ark Lighting employ a simple yet effective rolling stock order system which means we always have what we need on hand to supply in a timely manner. We will aim to hold stock to cover supply of lighting to 10 stores on short notice, with more always on the way.

#### **Key Staff:**

Adam Johnson - Founder & Director - 30 years experience, 11 years running Ark Lighting

#### Steve Nordstrom - Operations Manager - 12 years experience

Steve is responsible for the day to day operational running of Ark Lighting. Steve works closely with our key clients, manufacturers and freighting companies and runs a tight and organised ship. Steve's conscienciousness means Ark Lighting always has adequate stock to supply our clients. He has previously worked with LPA Lighting as a project Co-Ordinator overseeing on many large scale projects.

#### Daisy Metcalfe - Project Manager - 3.5 years experience

Daisy has exceptional customer service skills and continues to thrive with Ark Lighting. She currently oversees the lighting design at Ark Lighting and takes pride in providing timely and accurate lighting designs for our clients.

#### **Greg Alford - Warehouse Supervisor** - 13 years experience

Greg is the king of organised and has extensive warehouse experience. His prior experience supplying Cotton On stores in his previous role at LPA is a great asset.



#### **Environmental vision statement.**

Ark Lighting provides lighting design and lighting products for commercial and retail clients throughout Australia and New Zealand. As lighting accounts for 18–40% of electricity usage in commercial premises it is important we understand our role as a supplier of products that have environmental impact and encourage the development and use of innovative and sustainable lighting options for now and into the future.

Ark Lighting's mission is to ensure quality, low energy, non-toxic and sustainable products and consumables are used wherever possible throughout our business process. Our business cultivates behaviours and thinking that are always environmentally considered and work towards continual improvement with circular economy values at our core.

#### Are the materials we use Eco-rated?

While there is currently no defined standard for eco rated lighting products there is consideration given by the Council of Australian Government Energy Ministers agreeing to introduce minimum energy efficiency and quality standards for LED lamps in Australia & New Zealand in the future.

Ark Lighting monitors for updates on ratings and standards and encourages this. Ark Lighting products have an expected internal quality standard.

Our business does not follow a mass purchase/sell model, rather a high quality targeted market.
All products are sourced from reputable manufacturers with well established relationships that includes factory visits for quality control review in both China and Italy.

While there is no specific environmental standard, Ark Lighting only supplies Chip On Board (COB) LED products from batches 1-3. LEDs are known to have a longer life span however there is a plethora of LED chips and brands in the market. COB LED products from batches 1-3 are the highest rated LED in the market worldwide as the manufacturing of these chips ensures a consist lumen output and colour temperature. Further, these chips maintain a 10-year quality assurance guarantee whereby any replacement will retain the same properties. The eco outcome is a lighting product that has greater longevity and retains a significantly reduced power consumption (up to 75%) compared to other lighting options on the market.

Ark Lighting products are manufactured using non-toxic materials. The ingredients consist largely of recyclable aluminium and PC plastic. Laboratory testing confirms non-detect levels of lead, cadmium, mercury, chromium and bromine metals and Semi Volatile Organic Compounds used within the manufacturing process.

Please see our case study on contributing to Burwood Brickworks, the world's most sustainable shopping centre.



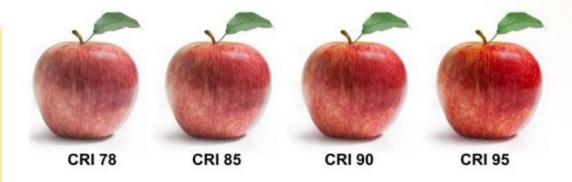
#### Are the materials we use Eco-rated?

Refurbishment of lighting products is the first option for LED fittings that may fail or come to the end of their working hours.

This means the bulk PC plastics and metal comprising the majority of the fitting can be re-used allowing the circular economy model to work. Priority is given to avoiding waste lighting materials going to landfill.

Lighting products supplied to retail stores are phase dimmable which provides the option to lower the lighting output and therefore reduce energy consumption.

The Building Code of Australia (BCA) has prescribed energy consumption allowances of 14W per m2 of floor space in retail areas. Utilising quality lighting products that provide a high Colour Render Index (CRI) of 90+ allow for a lower wattage light to be used with greater effect as the light output is more defined and natural.



Colour Render Index (CRI) - Illustrating the influence CRI has on lighting products.

#### What can we do to improve?

Our Clients stores are currently operating with:

Energy efficient COB LED Lighting from batches 1-3

CRI 90+ increasing lumen output without compromising energy consumption

Phase Dimmable lights

Non-toxic and principally recyclable ingredients

Refurbishable products

Accreditation to EMC safety standards for the Australian Market

Installed in accordance with Building Code Requirements limiting wattage per m2



#### What's Next?

Zoning the lights using Dali dimming is an option to improve both the environmental footprint created by lighting but also for selectively targeting areas of the store.

Pairing Dali with a control system, such as Lutron, you can set not only set scenes to suit the season, time of day, or mood of your choice but control each individual fitting. For example, you can switch for 'daytime' trading versus 'nightime' trading, choose to select fittings to highlight sales areas or 'latest arrivals'. This allows for controlling the amount of light and therefore energy utilised throughout the store.

We have currently future proofed our stock with DALI enabled track so there is an option to use DALI trackspots in future without needing complete replacement of the current infrastructure.

Our research and development department has finalised a 5 colour temperature track spot and downlights which enable storage of just black or white stock, rather than specific colour temperatures. This means as designs and trends fluctuate between very warm to very cool lighting there is no wastage of stock that is not used.

The additional flow on effect is less shipment because we can catered for our market with the one adjustable product. This is an example of how Ark Lighting, as an environmentally responsible and conscious supplier, is continually working to reduce our environmental footprint.

# Setting Standards.

It's about the effectiveness of the light blending into the store and providing an adequate level of light for visual safety, comfort and highlighting merchandise, therefore giving due consideration to where areas may be unnecessarily lit.

Lighting design is an important step in setting standards to continually improve the efficiency of products used. Reviewing designs means continuously updated technologies can be identified and implemented, if viable, to ensure keeping abreast of innovation and sustainable improvements.

#### **Immediate Fundamentals:**

LED only but ensure the QUALITY of the LED from world recognised brands CRI 90+ LED chip as this provides the greatest lumen output without needing to up the energy consumption (wattage).

Chip On Board technology (COB)
Confirm manufactured with non-toxic ingredients

Design review per store (provided by lighting supplier) to ensure effective design and innovation is identified

Future proof your lighting by choosing DALI dimmable products. DALI dimming is the way of the future for both effective lighting outcomes and energy efficiency.



# Contributing to Burwood Brickworks.

Melbourne's Burwood Brickwork's is the World's Most Sustainable Shopping Centre measured through accreditation to the Living Building Challenge (LBC).

The entire project was driven by both environmental and social sustainability, with focus of the LBC on "the relationship between impact and effort".

Ark Lighting was proud to contribute our lighting products to a couple of retail projects within this climate conscious project. As a contributing lighting supplier, we were required to ensure the lighting design and lighting products met the following requirements for both an environmentally and socially sustainable impact:

Lighting design meets all illuminance & uniformity requirements as per AS1680 (Minimum lighting levels required for specific tasks)

Lighting Power Density is no greater than 5 Watts per m<sup>2</sup>

All lights to have a CRI at least 80

Any light fitting with ballast must be high frequency ballasts

All lamps have diffusers, baffles etc to prevent direct visual exposure to the lamp

Must have the ability to control the lighting levels to suit their task and the background lighting conditions eg. Dimmable lighting or localised task lighting

### Contributing to Burwood Brickworks (continued)

While all our products meet or exceed a CRI rating of 80 and are constructed with non-toxic materials (as evidenced with our ingredients lists), the challenge came with providing a power density of no more than 5w/m and meeting the lighting needs of the client. Collaborating with the store designers we were able to meet this challenge and provide two comparative lighting outcomes tailored for their specific purposes:

#### **Eye Trend Optometrist**

Utilised a cool 4K light providing a bright space for customers to attend to their optical needs.

#### Hui Hui Supermarket

Utilised a warmer 3K light, allowing a softened visual impact upon entry into the southern entrance of the brickworks shopping precinct. The lighting layout is designed to calmly guide the customer around the store.





# Thank you.

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