

NEVER OUTSHONE

VEKTER 01.23





**LIGMAN**  
AUSTRALIA

Powered by



**ELS**

From our unique landscape to our modern cityscapes, Australia is a land of outdoor beauty. There is no better way to shine a light on this beauty than with Ligman Australia, one of the world's premier outdoor luminaire brands.

Ligman Australia products combine contemporary architectural lighting design with modern lighting technology to deliver quality aesthetic enhancing lighting, whilst ensuring energy efficiency and sustainability goals are met. Ligman Australia is exclusively distributed by Australia's own leading luminaire company ELS.

At ELS, we do more than distribute, we bring over 30 years of custom design and manufacturing experience to Ligman Australia. This enables us to respond to uniquely Australian design and specification briefs on behalf of clients to find their perfect exterior luminaire solutions. Through our local manufacturing capability, we customise and fully assemble the Ligman Australia product to meet each client's specific needs. We then rigorously test to ensure both compliance and performance capability to Australian standards.

Ligman Australia, one of the world's best exterior luminaire brands, powered by ELS, Australia's leading luminaire company, will amplify the beauty of any outdoor space.

# QUALITY & WARRANTY

Quality is the basis for which the longevity of Ligman luminaires can be determined. The Ligman factory in Thailand carries ISO-9001 QMS certification, which gives us the confidence that all luminaires are manufactured to the highest standards. To back this quality, Ligman houses their own SMT lab to provide assurance that all LED components are manufactured exactly to specification. Ligman produces all fabricated and die-cast components on-site along with all die-cast tooling in its state of the art toolmaking facility, ensuring exceptional quality of all components from beginning to end.

Our Brunswick assembly operation leverages these solid principles of quality management to ensure that all luminaires are thoroughly inspected and tested after assembly, for both physical and electrical operation before despatch. This ensures they will operate in all conditions long after our extensive warranty has passed. The ELS Quality Management System is based on the solid principles of ISO-9001, albeit not certified.

With this in mind, ELS performs various quality inspections before, during and post assembly to verify that all luminaires dispatched to a customer conform to their various requirements. This includes all locally produced and overseas sourced components. Electrical and visual inspections are carried out in 100% of products, so that no products leave without being individually tested and inspected. ELS also maintain a Non-Conformance Register along with associated quality documents to track, investigate and resolve issues when and if they arise. Through this commitment to quality of manufacture, Ligman Australia feel confident in offering an industry leading 10-year warranty to the Australian market.



# SHINING A LIGHT ON TESTING & LONGEVITY

Ligman Australia's inhouse testing laboratory allows for our luminaires to be customised and tested for the conditions which we expect them to encounter when installed in Australia. The Ligman Australia laboratory has capabilities in electrical and mechanical testing, endurance and thermal testing and photometric testing. This local testing is in addition to the rigorous testing that occurs at the Ligman Thailand facility involving ingress protection and impact protection testing, EMC testing and salt spray testing.

To ensure that all LED components are manufactured to specification, the Ligman factory in Thailand houses their own SMT lab. Their on-site and state of the art toolmaking facility means all fabricated and die-cast components are produced from beginning to end with exceptional quality.

With testing conducted in both Thailand and Australia, every luminaire that leaves the Ligman Australia factory is suitable for the environmental conditions of its desired location, able to withstand harsh coastal conditions, dry heat, tropical climates, and any other environments where damage can occur.



Corrosion and paint deterioration can be an issue especially with outdoor luminaires subjected to harsh environments. Through testing and the use of quality surface treatments and finishes, Ligman Australia ensures the longevity of our luminaires. At Ligman Australia we take numerous steps to ensure that our luminaire surface finishes are up to the task. We start with a low copper content aluminium, then passivate the surface using a multi-step chromate conversion coating. Finally, a high-grade exterior polyester powdercoat is applied to protect from corrosion, ensuring the durability of the finish. For added protection in harsh environments an extra 'primer' coat can be added between the conversion coating and exterior powdercoat by special request.

With the production of such durable and long-lasting products, Ligman Australia identified the need for an external fastener system to ensure that our luminaires were serviceable through years to come. The decision was taken to adopt zinc flake coating (ZFC) to the fasteners, a permanent barrier to corrosion and a further commitment to the longevity of the products.



**Woodland Portfolio**  
- Standard Offered Textures

**OAK**

Rich natural grain oak finish,  
perfect for contemporary exteriors

**WALNUT**

Dark knotty luxurious walnut  
ideal for prestigious spaces

**PINE**

Light natural pine for a clean  
and fresh Scandinavian feel

**Urban Portfolio**  
- Standard Offered Textures

**CONCRETE**

Smooth natural texture  
for that minimalist urban look

**CORTEN**

Stable Corten rust effect finish,  
ideal for urban and semi-industrial

**SOFTSCAPE**

A unique way to connect  
with nature and the environment

**STONE**

Classic stone finish perfect for  
both modern and heritage design

# INSPIRED BY NATURE

## Special Textured Finish Ranges

Ligman Australia offers a number of unique decorative powder coating finishes to our outdoor product range. These are a new generation of powders and heat transfer films that result in stunning and durable natural looking finishes, suitable for both commercial and residential applications.

Whilst our standard finishes offer customers the most common and popular natural wood and stone finishes, Ligman Australia are able to offer many more options for both woodland and urban finishes. These include many wood types and shades of wood, coloured woods, stone finishes and metal finishes, including brushed and galvanised steels, and even carbon fibres.

To request these options, please contact your local sales representatives with your project details and we can provide information and pricing, to suit your exact requirement.



# microVos™

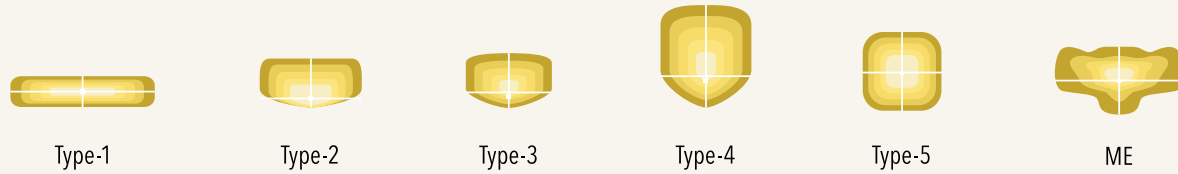
Ligman Australia MicroVOS™ (Micro Variable Optical System) is our unique technology which enables customers to specifically tailor optics for all fixtures where you see the MicroVOS™ logo.

All of the Vekter products are offered with the most common micro-optics (*as shown at top right*). However, if the need is for something more specific and unique, Ligman Australia can offer custom optics to suit the precise requirement for project lighting distributions. With MicroVOS™, Ligman Australia can combine optics to create custom solutions, including additionally specialised optics. Equally so if further cut-off angles are desired, or you have optics rotated 90, 180 or 270 degrees.

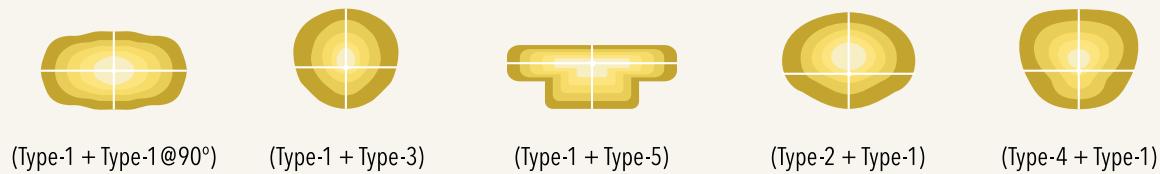
Don't let conventional mounting of luminaires hold you back. The Vekter wall mounted luminaire can be mounted to offer upward illumination and, when coupled with the MicroVOS™ optical system, provides incredible performance through targeted indirect illumination. Ligman Australia can photometrically test any custom optic solution in our Brunswick laboratory. Thus providing photometric files for lighting designs, to assist in quickly and seamlessly finding solutions to even the trickiest lighting requirements.

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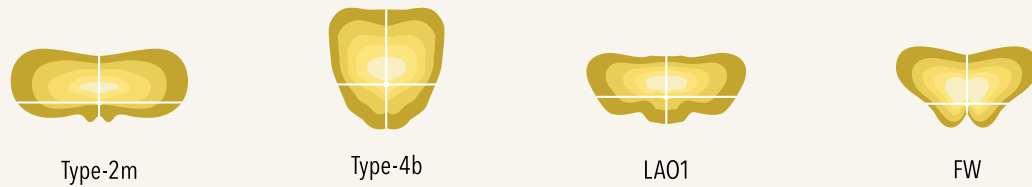
## Typical standard MicroVOS™ optics



## Combination optic examples



## Special solution optic examples



IESNA Type 2 medium beam with excellent backlight control, illuminance uniformity and cutoff

Wide IESNA Type 4 forward throw beam for wide area lighting such as car parks

Type II/III (long) beam for very wide pole to pole distances. Ideal for pedestrian paths and residential roads  
AS/NZS 1158.3.1 P-Classes

Beam with wide light distribution and good illuminance uniformity for residential street lighting and staggered pole setups





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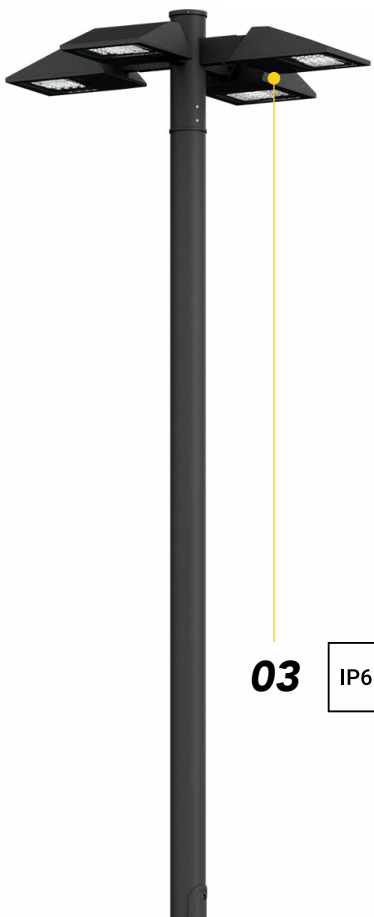
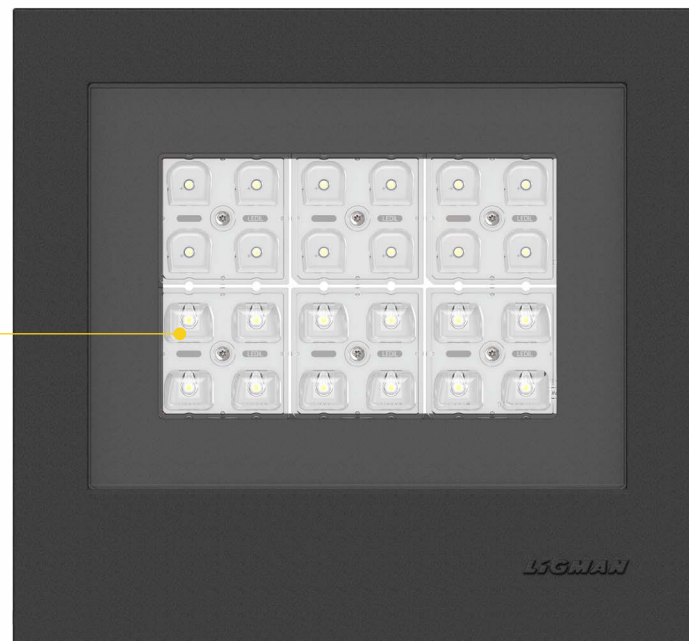
LIGMAN AUSTRALIA OUTDOOR LUMINAIRES INSTALLED AT FAIRFIELD SHOWGROUNDS NSW





**01** Die-cast aluminium housing and frame

**02** MicroVOS™ optical system



**03**

IP65 IK08

## FEATURES

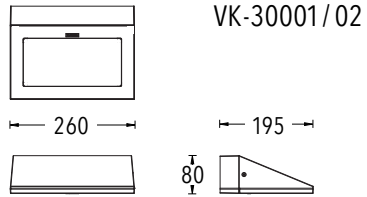
The Vekter family is one of Ligman Australia's most versatile ranges. Available in either wall mounted or post-top mounted variations, this product family offers a sleek, angular design and powerful technical performance. Ligman Australia's MicroVOS™ optical system is available across the range and ensures an endless selection of optical distributions to meet various Australian spacing standards. The Vekter range of products is highly robust and perfectly suited to the harsh Australian climate.

## CONSTRUCTION

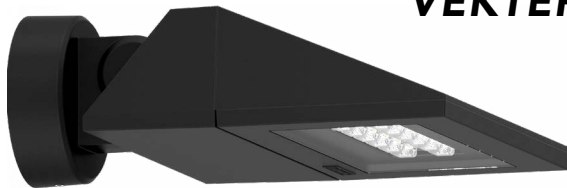
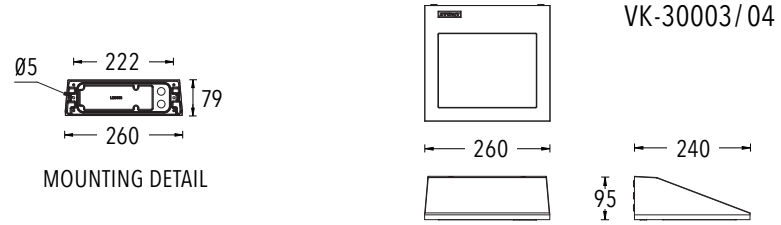
- Die-cast aluminium housing and frame
- Pre-treated before powder coating ensuring high corrosion resistance
- Stainless steel fasteners in grade 304 with zinc flake coating (ZFC)
- Durable silicone rubber gaskets
- Clear toughened glass
- 10kV surge protection on post-top versions
- Wall versions can be mounted for upward indirect illumination of ceilings



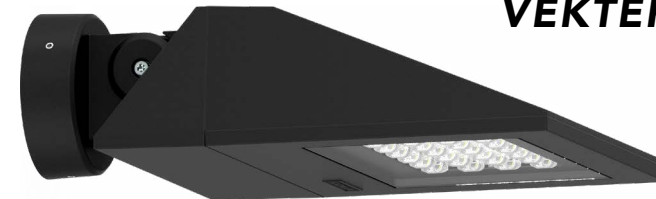
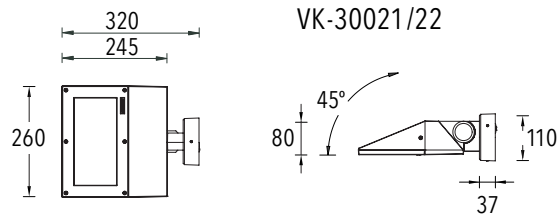
**VEKTER 1**



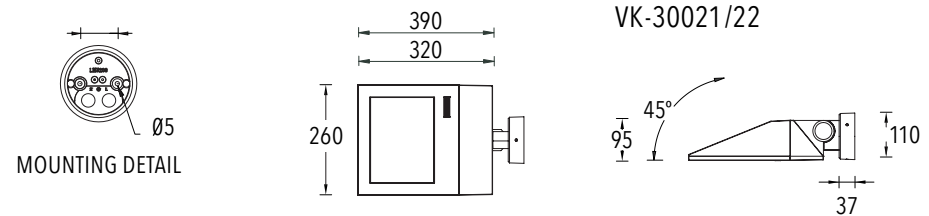
**VEKTER 2**



**VEKTER 9**



**VEKTER 10**





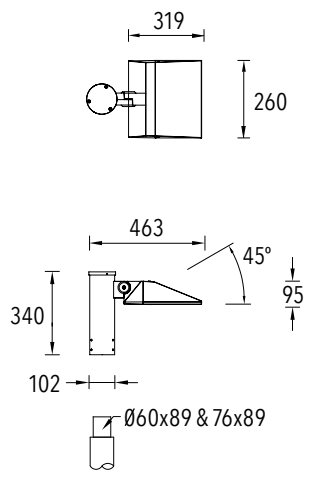
## Vekter Surface Facade Luminaires

|                              | Product Code    | Light Source | Power | Lumen          | Weight | Optics |     |      |          |          |         |          | CCT / CRI   | Dimming Type |
|------------------------------|-----------------|--------------|-------|----------------|--------|--------|-----|------|----------|----------|---------|----------|-------------|--------------|
|                              |                 |              |       |                |        | M      | W   | EW   | T2       | T3       | T4      | LA01     |             |              |
| <b>Medium</b>                |                 |              |       |                |        |        |     |      |          |          |         |          |             |              |
| <b>VEKTER 1</b>              | <b>VK-30001</b> | 12 LED       | 20 W  | 2148 - 2473 lm | 3.2 kg | 31°    | 53° | 110° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
|                              | <b>VK-30002</b> | 12 LED       | 28 W  | 2873 - 3330 lm | 3.2 kg | 31°    | 53° | 110° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
| <b>Large</b>                 |                 |              |       |                |        |        |     |      |          |          |         |          |             |              |
| <b>VEKTER 2</b>              | <b>VK-30003</b> | 24 LED       | 37 W  | 4509 - 5143 lm | 4.9 kg | 32°    | 52° | 108° | 140°x51° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |
|                              | <b>VK-30004</b> | 24 LED       | 54 W  | 6104 - 6954 lm | 4.9 kg | 32°    | 52° | 108° | 140°x51° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND           |
| <b>Mounting box - Medium</b> |                 |              |       |                |        |        |     |      |          |          |         |          |             |              |
| <b>VEKTER 9</b>              | <b>VK-30021</b> | 12 LED       | 20 W  | 2148 - 2473 lm | 4.6 kg | 31°    | 53° | 110° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
|                              | <b>VK-30022</b> | 12 LED       | 28 W  | 2873 - 3330 lm | 4.6 kg | 31°    | 53° | 110° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
| <b>Mounting box - Large</b>  |                 |              |       |                |        |        |     |      |          |          |         |          |             |              |
| <b>VEKTER 10</b>             | <b>VK-30041</b> | 24 LED       | 37 W  | 4509 - 5143 lm | 6.6 kg | 32°    | 52° | 108° | 140°x51° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |
|                              | <b>VK-30042</b> | 24 LED       | 54 W  | 6104 - 6954 lm | 6.6 kg | 32°    | 52° | 108° | 140°x51° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |

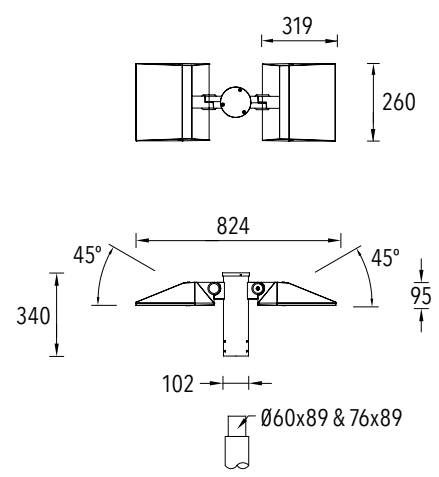


## Vekter Street & Area Luminaires

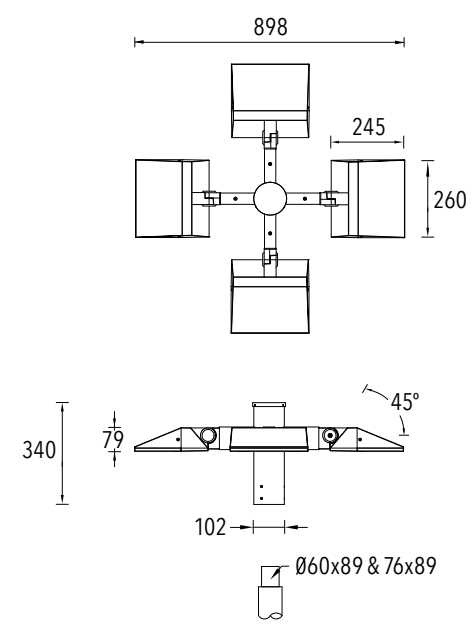
| Product Code      | Light Source    | Power  | Lumen      | Weight           | Optics  |     |     |      |          |          |         |          | CCT / CRI   | Dimming Type |
|-------------------|-----------------|--------|------------|------------------|---------|-----|-----|------|----------|----------|---------|----------|-------------|--------------|
|                   |                 |        |            |                  | M       | W   | EW  | T2   | T3       | T4       | LA01    |          |             |              |
| <b>One Side</b>   |                 |        |            |                  |         |     |     |      |          |          |         |          |             |              |
| <b>VEKTER 5</b>   | <b>VK-90001</b> | 24 LED | 19 & 37 W  | 2255 - 5143 lm   | 7.6 kg  | 32° | 52° | 117° | 140°x52° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |
|                   | <b>VK-90002</b> | 24 LED | 27 & 54 W  | 3052 - 6954 lm   | 7.6 kg  | 32° | 52° | 117° | 140°x52° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |
| <b>Two Sides</b>  |                 |        |            |                  |         |     |     |      |          |          |         |          |             |              |
| <b>VEKTER 6</b>   | <b>VK-90011</b> | 24 LED | 38 & 74 W  | 4509 - 10286 lm  | 13.2 kg | 31° | 52° | 119° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
|                   | <b>VK-90012</b> | 24 LED | 54 & 108 W | 6104 - 13908 lm  | 13.2 kg | 31° | 52° | 119° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND           |
| <b>Four Sides</b> |                 |        |            |                  |         |     |     |      |          |          |         |          |             |              |
| <b>VEKTER 15</b>  | <b>VK-90021</b> | 12 LED | 80 W       | 8592 - 9892 lm   | 19.7 kg | 31° | 53° | 119° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
|                   | <b>VK-90022</b> | 12 LED | 112 W      | 11492 - 13320 lm | 19.7 kg | 31° | 53° | 119° | 144°x50° | 139°x68° | 97°x77° | 151°x65° | 8030   8040 | ND   DA      |
| <b>Four Sides</b> |                 |        |            |                  |         |     |     |      |          |          |         |          |             |              |
| <b>VEKTER 16</b>  | <b>VK-90031</b> | 24 LED | 148 W      | 18036 - 20572 lm | 28 kg   | 32° | 52° | 117° | 140°x52° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |
|                   | <b>VK-90032</b> | 24 LED | 216 W      | 24416 - 27816 lm | 28 kg   | 32° | 52° | 117° | 140°x52° | 140°x72° | 97°x82° | 151°x65° | 8030   8040 | ND   DA      |



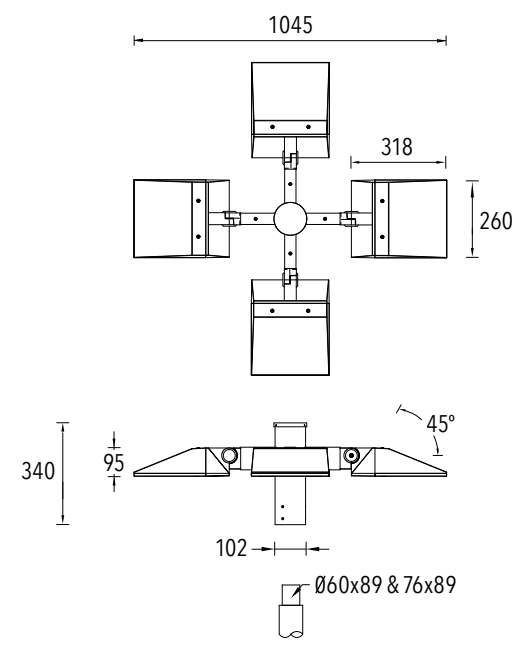
VK-90001/02



VK-90011/12



VK-90021/22



VK-90031/32



**VEKTER 5**



**VEKTER 6**



**VEKTER 15**



**VEKTER 16**



**VEKTER 1**



**VEKTER 5**



# PRODUCT PERFORMANCE SPACING TABLES

Designed specifically to address the requirements of Australian P Classifications, the LA01 optic from the Ligman Australia MicroVOS™ offering provides exceptional results for pedestrian paths and residential roads in line with AS/NZS 1158.3.1 P-Classes. The Ligman Australia LA01 optic can achieve up to 35% greater spacings when compared to the same luminaire fitted with a T2 optic, thus substantially reducing the number of luminaires required. Shown below are spacing tables for both wall and post mounted Vekter luminaires using the Ligman Australia LA01 optic.

## VEKTER 1. Maximum pathway spacing in metres

| LUMINAIRE                   | AS/NZS 1158.3.1:2020 | PATHWAY WIDTH |         |         |         |
|-----------------------------|----------------------|---------------|---------|---------|---------|
|                             |                      | 2 MTR         |         | 3 MTR   |         |
|                             |                      | MH 3.0m       | MH 4.0m | MH 3.0m | MH 4.0m |
| LIGA-VK-30001-500-LA01-8030 | PP1 LIGHT CAT        | 10.3          | 14.0    | 10.2    | 13.9    |
|                             | PP2 LIGHT CAT        | 12.5          | 17.3    | 12.4    | 17.2    |
|                             | PP3 LIGHT CAT        | 15.6          | 21.1    | 15.5    | 21.0    |
|                             | PP4 LIGHT CAT        | 17.3          | 24.1    | 17.2    | 24.0    |
|                             | PP5 LIGHT CAT        | 22.2          | 28.2    | 22.1    | 28.1    |

MAINTENANCE FACTOR - 0.8. OFFSET FROM PATH EDGE - 0.0m (Wall light). Spacing table to be used as a guide. Figures are based on parameters set out in AS/NZS 1158.3.1:2020 - Table 3.4.

Footnote D.  
 PP1 2.0m MH 3.0m - 50% of point horizontal illuminance is achieved over an area of 4.6m on the wall light far side.  
 PP1 3.0m MH 3.0m - 50% of point horizontal illuminance is achieved over an area of 3.7m on the wall light far side.  
 PP1 3.0m MH 4.0m - 50% of point horizontal illuminance is achieved over an area of 4.8m on the wall light far side.  
 PP2 3.0m MH 3.0m - 50% of point horizontal illuminance is achieved over an area of 4.3m on the wall light far side.

## VEKTER 5. Maximum pathway spacing in metres

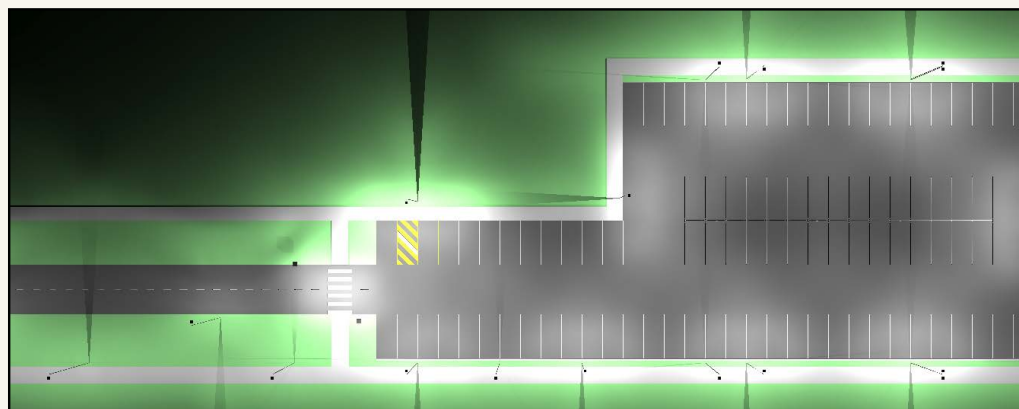
| LUMINAIRE                   | AS/NZS 1158.3.1:2020 | PATHWAY WIDTH |         |         |         |
|-----------------------------|----------------------|---------------|---------|---------|---------|
|                             |                      | 2 MTR         |         | 3 MTR   |         |
|                             |                      | MH 4.0m       | MH 5.0m | MH 4.0m | MH 5.0m |
| LIGA-VK-90001-500-LA01-8030 | PP1 LIGHT CAT        | 16.3          | 19.9    | 16.3    | 19.8    |
|                             | PP2 LIGHT CAT        | 19.6          | 24.6    | 19.5    | 24.5    |
|                             | PP3 LIGHT CAT        | 24.8          | 30.1    | 24.7    | 30.1    |
|                             | PP4 LIGHT CAT        | 27.6          | 34.4    | 27.5    | 34.3    |
|                             | PP5 LIGHT CAT        | 34.5          | 39.9    | 34.3    | 39.8    |

MAINTENANCE FACTOR - 0.8. OFFSET FROM PATH EDGE - 0.5m. Spacing table to be used as a guide. Figures are based on parameters set out in AS/NZS 1158.3.1:2020 - Table 3.4.

# MULTI REQUIREMENT SITE

The versatility of the Vekter range lends itself perfectly to sites that require the lighting design to conform to multiple Australian standards.

Using various versions of the Vekter product range mounted at different heights, varying outputs, and fitted with custom optics, a solution can be achieved with a single luminaire aesthetic across 4 lighting sub categories in one project site.



## CATEGORY

## PRODUCT SPECIFICATION

Carpark Lighting Sub Category PC2  
AS/NZS 1158.3.1:2020 TABLE 3.7

Vekter VK-90001-500-T4-W40 - 8MTR MH

Disabled Carpark Lighting Sub Category PCD  
AS/NZS 1158.3.1:2020 TABLE 3.7

Vekter VK-90002-700-T4-W40 - 8MTR MH

Pathway Lighting Sub Category PP3  
AS/NZS 1158.3.1:2020 TABLE 3.4

Vekter VK-90002-350-LA01-W40 - 8MTR MH

Pedestrian Crossing Sub Category PX3  
AS/NZS 1158.4 2015 TABLE 3.2

Vekter VK-90002-700-PXL-W40 - 5MTR MH

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