



we-ef

WE-EF LIGHTING
VFL500 LED SERIES
Street and Area Lighting Luminaire
Australia/NZ Edition
2016





Since the release in 2011 VFL500 LED street and area luminaires quickly became a global success. Over 14,000 VFL500 LED luminaires have been supplied to projects in Australia and New Zealand to fulfil nearly every lighting objective – from lighting of public spaces to roadway illumination.

With three housing sizes, post top and side-entry mounting options, six standard optical choices, endless hybrid optic possibilities, multiple wattage and lumen packages the VFL500 LED series is a true all-around talent.

VFL500 LED street and area luminaire received the German Design Award in 2014, after winning recognition for design quality at the Red Dot awards in 2012.

In 2016, in addition to the proven VFL500 Series luminaires, WE-EF launches the VFL500X Series luminaires with increased performance and energy-saving options – to complete our street and area lighting offer.



OVERVIEW VFL500 AND VFL500X SERIES

Main Features

- IP classification IP66
- Impact protection IK08
- Housing Marine-grade, die-cast aluminium alloy, 5CE superior corrosion protection
- Hardware PCS hardware (polymer coated stainless steel)
- Cover PMMA RFC® Reflection Free Contour technology
- Gasket CCG® Controlled Compression Gasket technology
- Heat sink Integrated
- Surge protection device Remote SP10 kV/10 kA
Integrated surge protection available on request (except VFL530X and VFL530X-SE 24 LED 1050 mA)



Mornington Pier, Mornington (AUS).



VFL500



VFL500-SE



VFL500X



VFL500X-SE

| | | | | |
|----------------------------------|----------------------|---------------------|-----------------|-----------------------|
| Luminaire Housing Options | VFL520/VFL530/VFL540 | VFL530-SE/VFL540-SE | VFL530X/VFL540X | VFL530X-SE/VFL540X-SE |
|----------------------------------|----------------------|---------------------|-----------------|-----------------------|

| | | | | |
|---------------------------|---------------|---------------|------------------------|------------------------|
| LED | | | | |
| Number of LEDs | 12-42 LEDs | 12-48 LEDs | 12-42 LEDs | 12-48 LEDs |
| Colour Temperatures (CCT) | 3000 K/4000 K | 3000 K/4000 K | 3000 K/4000 K | 3000 K/4000 K |
| Wattages | 12-84 W | 12-96 W | 24-181 W | 24-207 W |
| Drive Current | 350 mA/700 mA | 350 mA/700 mA | 700 mA/1050 mA/1400 mA | 700 mA/1050 mA/1400 mA |
| LED Lumen Output Range | 1,600-10,300 | 1,600-11,800 | 3,200-24,100 | 3,200-27,600 |

| | | | | |
|--|------------|------------|-----|-----|
| Optics | | | | |
| [P65] Pedestrian / Bicycle Lane | Yes | Yes | Yes | Yes |
| [S60] Streetlighting | Yes | Yes | Yes | Yes |
| [S65] Streetlighting / Intersection / Public Space | Yes | Yes | Yes | Yes |
| [S70] Streetlighting | Yes | Yes | Yes | Yes |
| [A60] Asymmetric 'Forward-Throw' | Yes | Yes | Yes | Yes |
| [R65] Rectangular 'Forward-Throw' | Yes | Yes | Yes | Yes |
| [V] Roadlighting | On request | On request | Yes | Yes |
| [Q] Area Lighting, Symmetric | On request | On request | Yes | Yes |

| | | | | |
|--|----------------------------------|----------------------------------|------------------|--------------------------------|
| Applications | | | | |
| P Category Lighting – Pathway 12-24 W | Optimum [P65] [S70] | Optimum [P65] [S70] | Project-specific | Project-specific |
| P Category Lighting – Road 12-48 W | Optimum [R65] [S70] [S60] | Optimum [R65] [S70] [S60] | Project-specific | Project-specific |
| P Category Lighting – Car park 24-144 W | Optimum | Project-specific | Optimum | Project-specific |
| V Category Lighting – City Centre 72-207 W | Project-specific | Project-specific | Project-specific | Optimum [S60] [S70] [V] |
| V Category Lighting – Motorway 72-207 W | Project-specific | Project-specific | Project-specific | Optimum [V] |
| Industrial High Level Lighting 144-207 W | Project-specific | Project-specific | Project-specific | Optimum [A60] [R65] |

| | | | | |
|---------------------|------------------------|---------------------|------------------------|-----------------------------|
| Installation | | | | |
| Mounting Type | Post Top | Side Entry | Post Top | Side Entry |
| Spigot Dimensions | Ø76 x 80 mm | VFL530-SE Ø42 x 100 | Ø76 x 80 mm | VFL530X-SE Ø42 x 100 |
| | (optional Ø60 x 80 mm) | VFL540-SE Ø60 x 100 | (optional Ø60 x 80 mm) | VFL540X-SE Ø60 x 100 |
| Pre-wired | 6 m (VFL520/530) | 6 m (VFL530-SE) | 12 m (VFL530X 700mA) | 12 m (all versions except |
| | 12 m (VFL540) | 12 m (VFL540-SE) | | VFL540X-SE 144/207 W) |
| | | | | 20 m (VFL540X-SE 144/207 W) |

THE NEW VFL500X SERIES – FEATURES AND BENEFITS

X-tra efficiency = Less watts, same performance

The new VFL500X series luminaires offer high lumen outputs while consuming less energy. Thanks to higher LED efficacy values, VFL500X luminaires are 25-30% more efficient than VFL500 luminaires.

X-tra performance = More lumens. And even more lumens

With lumen outputs nearly up to 27,000 lumens the VFL500X series opens new application possibilities where high lighting levels are required. Lighting levels of industrial area lighting applications, motorways and large car parks can be easily met with 40% extra output.

X-tra competitiveness

Total project cost can be reduced thanks to the wider range of luminaires suitable for lighting applications. 'Downsizing' to a VFL500X luminaire with a lower number of LEDs can bring cost-saving per luminaire, while a total number of luminaires – and poles – needed can be brought down thanks to higher performance and new optical choices.

10-Year Warranty as usual

All WE-EF LED luminaires supplied to Australia and New Zealand come with a market-leading 10-year warranty on LED components.



The OLC® technology is the ideal method for achieving a uniform and energy saving lighting solution, providing highest safety and visual comfort, in ensuring that the failure of individual LEDs does not lead to an adverse affect in the lighting.



RFC® technology – engineered with a UV-stabilised PMMA panel which has a contoured surface, contoured in a way that imitates the shape of the LED lens; the goal is to minimise the loss of light that normally occurs due to internal reflection.



Using either a 1-10 V or DALI interface with electronic converter, the light output and energy usage of the individual luminaires can be controlled. All components of the luminaire are engineered for reliability and longevity.



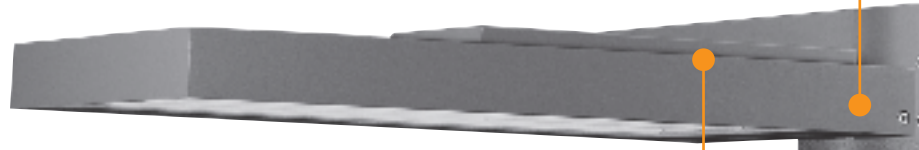
PCS coated fasteners made from austenitic stainless steel reduce the risk of galvanic corrosion.

10-Year Warranty

All WE-EF luminaires supplied to Australia and New Zealand have 10-year warranty on LED components.



Outstanding and long lasting anticorrosion properties can only be achieved by a comprehensive, integrated approach. WE-EF's unique 5CE system encompasses five critical elements: Substrate; Conversion coating; Powdercoating; PCS hardware (polymer coated stainless steel); Process control.



All VFL500 and VFL500X luminaires are fitted with a 10 kV/10 kA surge protection. If the surge protector has been triggered by an adverse event, the luminaire is automatically disconnected from the mains.

Important: For comprehensive protection of the luminaire against lightning and electrical surges, we generally recommend primary (Type 1) and secondary (Type 2) surge arrestors be installed into the switch board.

40% More Efficient

With lumen outputs up to 27,000 lumens the VFL500X series opens new application possibilities where high lighting levels are required. Lighting levels of industrial area lighting applications, motorways and large car parks can be easily met with 40% extra output.

WE-EF LED ENGINEERING

Thermal Management

As a luminaire manufacturer, WE-EF's challenge is to create the best possible thermal conditions inside its products so that, as far as technically feasible, LEDs are able to operate under optimum conditions, without failures. This objective can only be successfully achieved through reference to product data sheets published by the LED manufacturers, which are generally based on their internal test results and mathematical calculations. Determining if LEDs are operating at their optimum inside a luminaire will, for example, affect service life and luminous flux performance. With the improved thermal characteristics of modern LED chips, albeit we are driving them harder (in the case of 1050mA and 1400mA).

LED – Operating Current (If)

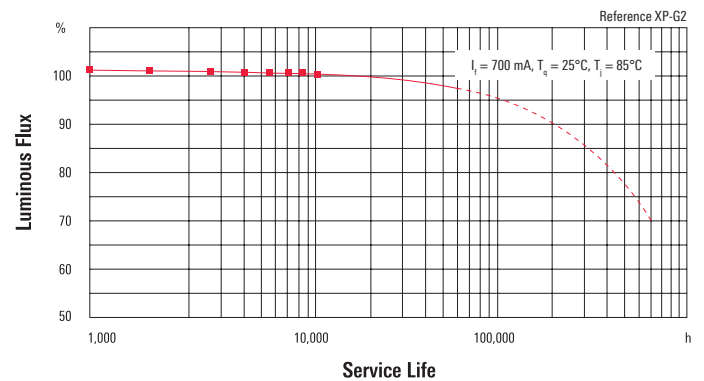
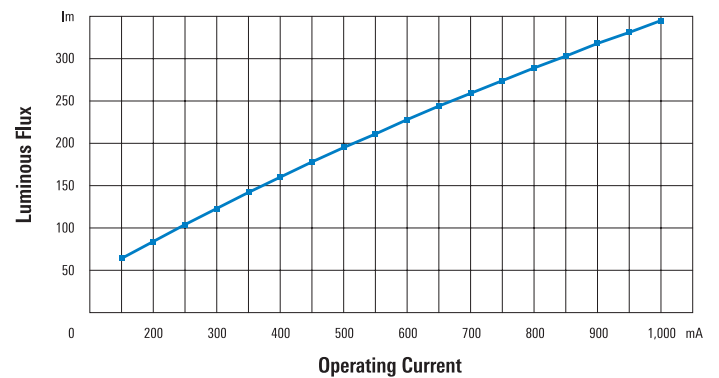
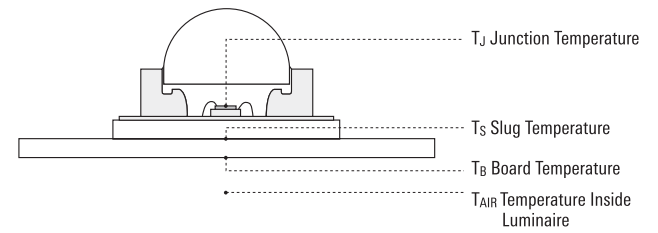
LEDs may be operated at different currents. While 700, 1050 and 1,400 mA are most commonly applied now-a-days, developments are showing a clear trend towards 2,000 to 4,000 mA. The greater the operating current, the greater the luminous flux. Unfortunately, the relationship between these two parameters is a degressive one; meaning, when the current is increased, the luminous flux will increase only sub-proportionately – in other words, efficacy (lumens per watt) drops. This phenomenon becomes even more pronounced at increased junction temperatures.

At the current state of technology, it is between 350 and 1,400 mA that LEDs feature a desirable, more or less linear, relationship between operating current and luminous flux. WE-EF's policy is not to drive LEDs more than 50 % of the rated operating current. The fact that this is less than 50% of their maximum operating current, we still achieve L90B10 at 60,000 hours. (Measured in accordance with LM-80 and TM-21 guidelines).

LED – Service Life and Junction Temperature (T_J)

Service life data published by LED manufacturers are based on values measured over a period of at least 6,000 hours, in accordance with LM-80-08. The combination of relevant test results with mathematical models, in line with TM-21, allows conclusions to be drawn regarding LED behaviour over a considerably greater period of time — up to six times the measurement period.

Likewise, luminaire manufacturers must also subject their products to extensive series of tests, so as to allow meaningful statements to be made about system service life (WE-EF luminaires are subjected to a minimum 10,000 hours of continuous testing).



The service life information that can be derived from this process is based on various assumptions that need to be clearly documented. The following essential data must be included in relevant test reports:

- Rated ambient performance temperature (T_a).
- LED operating current (I_f).
- LED maximum decline in luminous flux (B_v).
- Service life = lighting hours.

Depending on operating current I_f and system performance, LED junction temperatures T_j vary from luminaire to luminaire. For luminaires featured in WE-EF literature, when fitted with the listed maximum number of LEDs and operated at $I_f = 700$ mA and $T_a = 25^\circ\text{C}$, the resulting junction temperature reaches a maximum of approximately $T_j = 85^\circ\text{C}$.

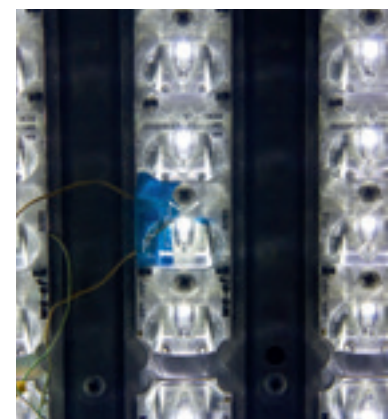
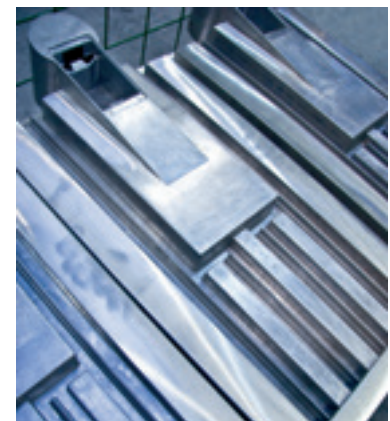
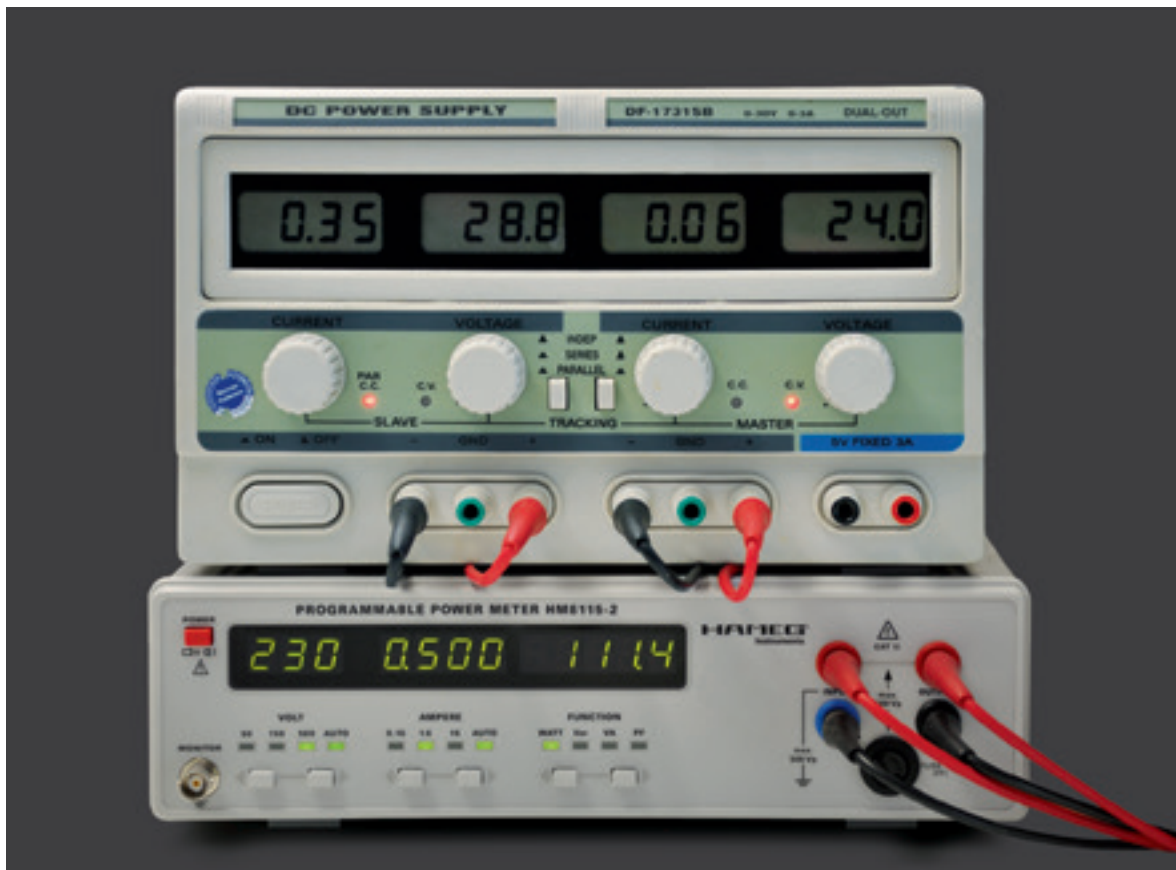
Should the actual on-site, mean ambient temperature for example stand at 30°C (vs. $T_a = 25^\circ\text{C}$), then the junction temperature T_j will increase by the same differential (30°C to 25°C).

Like conventional lamps, LEDs age and the initial (nominal) luminous flux drops the longer an LED is in use. The lower the thermal load to which LEDs are exposed, the lower the decline in luminous flux. The diagram shown below depicts the relationship between an LED's time of operation and its luminous flux (at $I_f = 700$ mA and $T_a = 25^\circ\text{C}$, $T_j = 85^\circ\text{C}$).

| $T_a = 25^\circ\text{C}$ | | | | |
|--------------------------|-------------------------------------|--------------------|---------------------|---|
| I_f [mA] | T_j^{***} [$^\circ\text{C}$] | TM-21 [1,000 h] | LLMF at 60,000 h | Theoretically Expected Service Life [1,000 h] |
| | | | | L95 |
| 350* | 45 | >60 | 0.975 | 170 |
| 500* | 55 | >60 | 0.950 | 150 |
| 700* | 69 | >60 | 0.925 | 120 |
| 1,050** | 80 | >60 | 0.950 | 90 |
| 1,400** | 90 | >60 | 0.925 | 80 |

* reference LED: XP-G2
 ** reference LED: XP-L
 *** recorded mean junction temperature (varies from luminaire to luminaire)

LED/Lamp Lumen Maintenance Factor (LLMF).



IOS® INNOVATIVE OPTICAL SYSTEM

WE-EF's IOS® Innovative Optical System has been developed to satisfy two specific requirements; the first relating to the various international lighting standards that prescribe performance and focus on public amenity and safety issues; the second being the wide range of customised solutions that are typically the domain of the lighting design professional. IOS® is a complete system with a comprehensive set of solutions, including optical accessory toolkits that are purpose designed, engineered and tested.

IOS® system applies across the WE-EF range of luminaires and includes:

- In-house CAD design.
- Precision manufactured optical system.
- High photometric performance, beam efficiency and control.
- Superior glare control and visual comfort through appropriate shielding angles.
- Tooling exclusive to WE-EF.
- Optional optical accessory toolkit.

In street and area lighting applications, IOS® features full cut-off light distribution in compliance with European standard EN 13201 (Class G3/G4/G5/G6):

- Zero light emission above the 90° horizontal.
- Tightly controlled 'candela' intensities in the critical high-angle glare zone at 80°-90° (from nadir).
- Solutions to light trespass and dark skies concerns.

OLC® One LED Concept

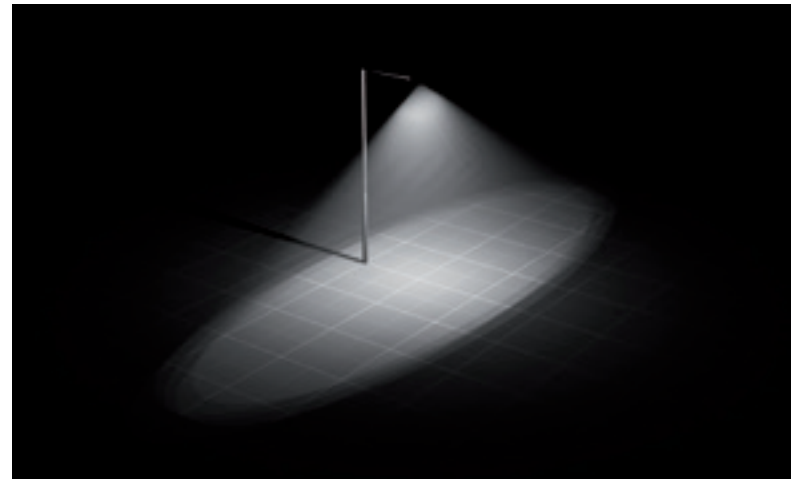
In street and area lighting applications, a common approach is to combine LEDs with individual, symmetric or elliptical lenses which are then selectively aimed, as a means of achieving a uniform distribution. Through this multi-spot technique, the resulting interaction and overlapping of beams delivers overall light levels and, to some extent, uniformity. WE-EF's engineers have taken the opposite approach by pioneering a radically different, multi-layer technique, the OLC® One LED Concept: All LEDs within a luminaire are fitted with identical, CAD engineered lenses, and aimed in the same direction. As a result, illumination on the target surface will uniformly increase in intensity if more LEDs are added (or, conversely, be reduced if LEDs are removed), while uniformity levels always remain fully intact. The OLC® technology presents an ideal, future proof solution for street and area lighting applications. It combines the multi-layer lighting approach with modular PCB/LED/lens engineering and thereby balances the need for safety with visual comfort and energy savings.

Main features of OLC® One LED Concept:

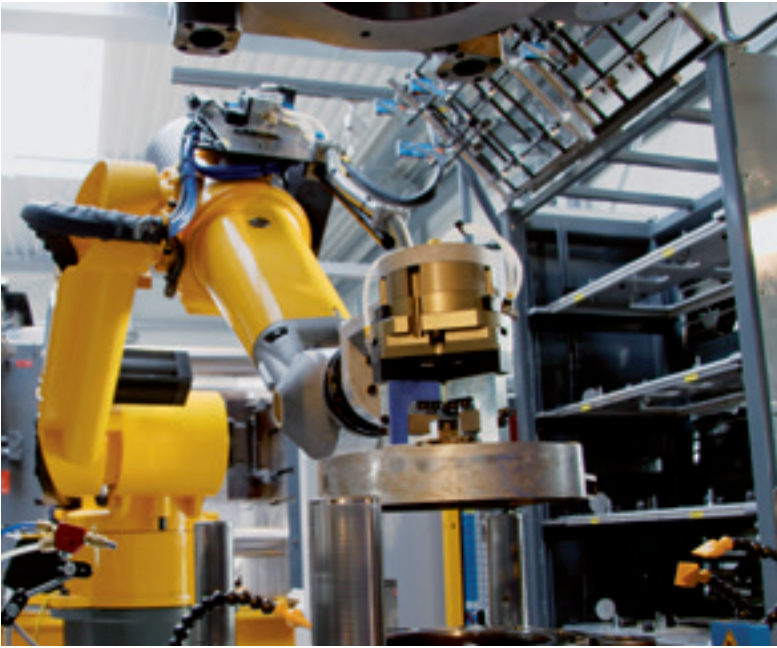
- CAD-engineered and precision manufactured lenses deliver a tightly controlled light distribution while reducing light pollution to an absolute minimum.
- In case of failure of one or several LEDs within a luminaire, light levels drop, while uniformity is retained.
- Modular PCB/LED/lens assemblies can be replaced in case of failure or for upgrading.
- The system is 'future proof' and, when upgraded to next generation LEDs, will retain its photometric integrity.



Common multi-spot approach.



WE-EF's multi-layer technique.

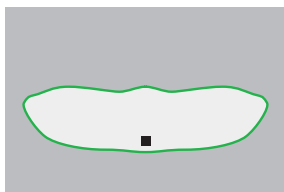


IOS® INNOVATIVE OPTICAL SYSTEM



[V] Lens – Main Features

- Asymmetric 'side throw' distribution for roads with vehicular traffic.
- Maximum angle of peak intensity 65° to 70°.

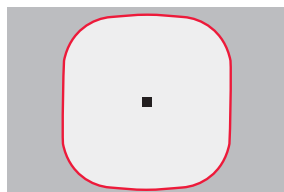


[V]



[Q] Lens – Main Features

- Rectangular distribution for car parks and area lighting applications.
- Maximum angle of peak intensity 65°.

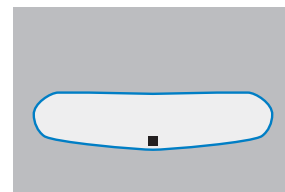


[Q]



[P65] Lens – Main Features

- Asymmetric 'side throw' distribution for pathways and cycle ways.
- Maximum angle of peak intensity 65° to 70°.
- Forward-controlled distribution.



[P65]



[S60] Lens – Main Features

- Streetlighting distribution, luminance-optimized lens.
- Spacing 7 to 8 times the mounting height [S60].

[S65] Lens – Main Features

- Streetlighting distribution, luminance-optimized lens.
- Spacing 5 to 9 times the mounting height [S65].

[S70] Lens – Main Features

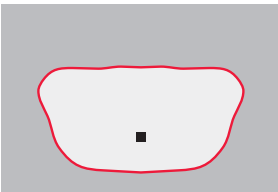
- Streetlighting distribution, illuminance-optimized lens.
- Spacing 4 to 10 times the mounting height.

[A60] Lens – Main Features

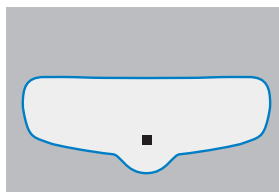
- Asymmetric ‘forward throw’ distribution for lighting public spaces.
- Maximum angle of peak intensity 60° to 65°.
- Rearward spill limited to an angle of 10°.

[R65] Lens – Main Features

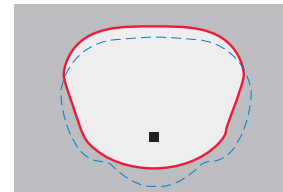
- Rectangular ‘forward throw’ distribution for lighting public spaces and parking lots.
- Maximum angle of peak intensity (side and forward) under approximately 65°. Rearward spill limited to an angle of 10°.



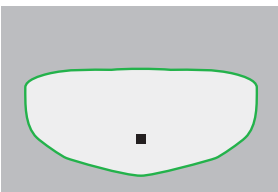
[S60]



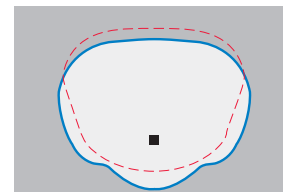
[S70]



[A60]



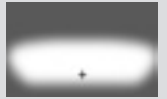
[S65]



[R65]

[V] BEAM FOR V CATEGORY LIGHTING APPLICATIONS (AS/NZS 1158)

With large luminaire quantities and long operating hours, V Category applications are designed with energy and cost-efficiency in mind.



[V]

The following benefits of WE-EF street and area luminaires help achieve the design objectives:

- Luminaire lumen outputs of ~26,600 lumens in combination with a V-category optimized [V] optic result in luminaire spacing up to 65 metres.
- Ingress protection IP66 and impact resistance IK08 make WE-EF LED luminaires maintenance-free.
- State-of-the-art LED engineering and sophisticated thermal management prolong the LED expected service life to over 80,000h, with minimal (5%) lumen depreciation over this time period.
- 10-year warranty on LED components adds to the reduction of overall project cost.

Since 2013, WE-EF LIGHTING has supplied 1,100 street and area LED luminaires to road and street lighting projects in Australia and New Zealand.



Sydney Road, Coburg, Victoria. V3 category lighting using ASP530 LED street and area luminaires.

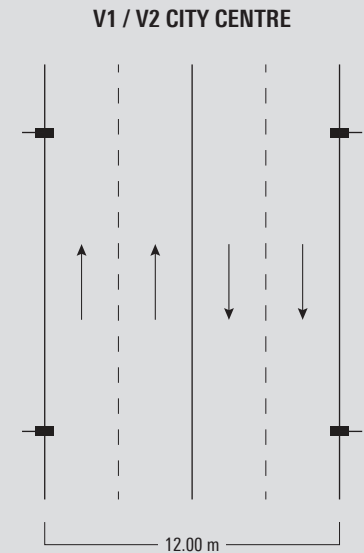
The main factors effecting the pole spacing are the pole height, luminaire overhang distance, road width, road alignment and pole arrangement – in conjunction with the luminaire optical option and wattage.

V1 / V2 LIGHTING CATEGORIES (AS/NZS 1158) – CITY CENTRE

Design Parameters

- Road width: 12 m
- Overhang: 0 m
- Outreach arm: 1 m
- Pole arrangement: Opposite
- Traffic flow: Two way

| Luminaire | Pole Height | Pole Spacing | |
|--|-------------|--------------|------|
| | | V1 | V2 |
| VFL540X-SE V.BEAM 48 LED 144 W/1050 mA | 9 m | 46 m | 46 m |
| VFL540X-SE V.BEAM 48 LED 207 W/1400 mA | 9 m | 46 m | 46 m |
| VFL540X-SE V.BEAM 48 LED 144 W/1050 mA | 10.5 m | 53 m | 53 m |
| VFL540X-SE V.BEAM 48 LED 207 W/1400 mA | 10.5 m | 53 m | 53 m |



V3 LIGHTING CATEGORY (AS/NZS 1158) – MOTORWAY

Design Parameters

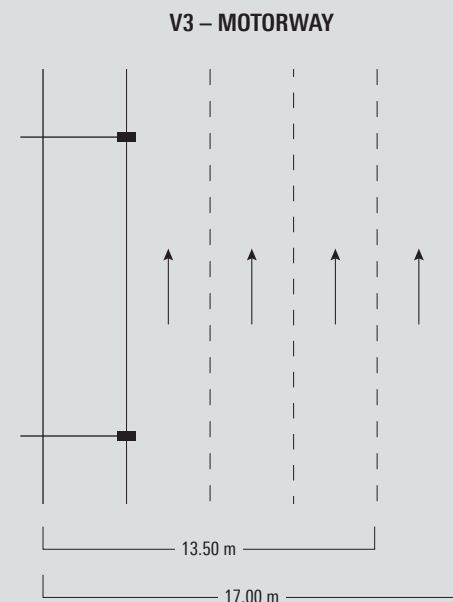
- Road width: 13.5 m (3 lanes plus emergency lane)
- Overhang: 3 m
- Outreach arm: 4.5 m
- Pole arrangement: Single-sided
- Traffic flow: One way

| Luminaire | Pole Height | Pole Spacing |
|--|-------------|--------------|
| VFL540X-SE V.BEAM 48 LED 144 W/1050 mA | 12 m | 57 m |
| VFL540X-SE V.BEAM 48 LED 207 W/1400 mA | 12 m | 57 m |
| VFL540X-SE V.BEAM 48 LED 144 W/1050 mA | 13.7 m | 52 m |
| VFL540X-SE V.BEAM 48 LED 207 W/1400 mA | 13.7 m | 65 m |

Design Parameters

- Road width: 17 m (4 lanes plus emergency lane)
- Overhang: 3 m
- Outreach arm: 4.5 m
- Pole arrangement: Single-sided
- Traffic flow: One way

| Luminaire | Pole Height | Pole Spacing |
|--|-------------|--------------|
| VFL540X-SE V.BEAM 48 LED 144 W/1050 mA | 12 m | 51m |
| VFL540X-SE V.BEAM 48 LED 207 W/1400 mA | 12 m | 59m |
| VFL540X-SE V.BEAM 48 LED 144 W/1050 mA | 13.7 m | 48m |
| VFL540X-SE V.BEAM 48 LED 207 W/1400 mA | 13.7 m | 64m |



[Q] BEAM FOR AREA LIGHTING APPLICATIONS

Modularity of WE-EF's IOS® Innovative Optical System enables creation of project and application specific optics, commonly resulting in significantly increased luminaire performance and reduction of the total project cost. The [Q] beam is a good example of this approach: designed specifically for car parks and area lighting applications, this optic helps reduce the overall number of luminaires required.

For an example of [Q] beam application resulting in reduced number of luminaires and higher energy-efficiency of the project please refer to the next page. The results may vary depending on the car park configuration and lighting levels required.



[Q]

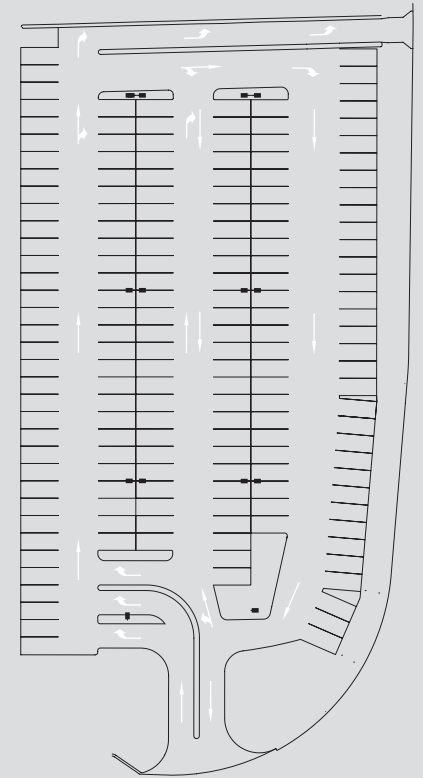
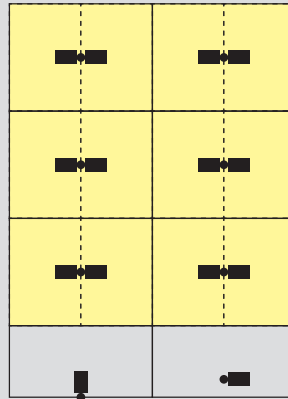


Sydney Adventist Hospital. Wahroonga, NSW (AUS).

P11B CAR PARK CASE STUDY

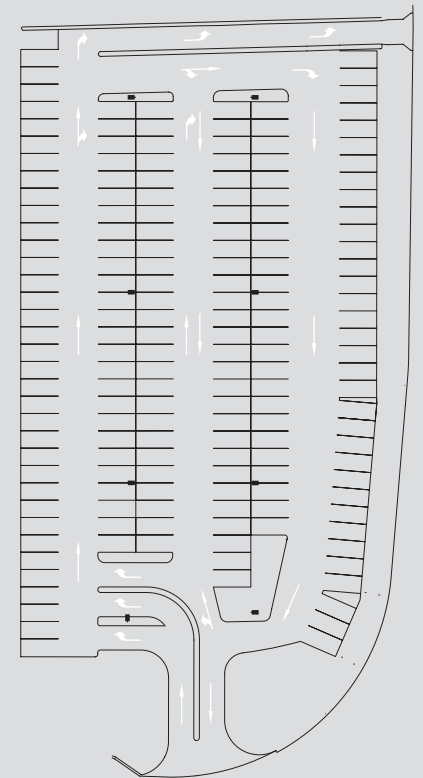
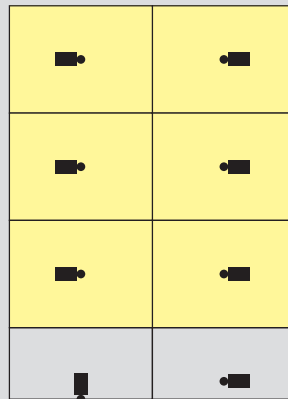
Standard Solution

- Luminaire: VFL530 XP-G2 48 W
- Quantity: 14
- Optic: R65.BEAM
- Delivered Lumens: 5000 lm
- System Wattage: 55 W
- Total Wattage: 14 x 55 W = 770 W



Optimised Solution

- Luminaire: 6 x VFL530X-SE Q.BEAM 18 LED 54 W / 1050 mA 4000 K
2 x VFL530X-SE Q.BEAM 12 LED 36 W / 1050 mA 4000 K
- Quantity: 8
- Optic: Q.BEAM
- Delivered Lumens: 7000 lm / 5000 lm
- System Wattage: 60 W / 40 W
- Total Wattage: 6 x 60 + 2 x 40 = 440 W
(43% less compared to the standard solution)



WE-EF CONTROL AND SURGE PROTECTION

LED lighting installations may be operated in a highly economic and environmentally-friendly manner when the LEDs are dimmed on a time or activity controlled basis. Dimming lowers power consumption, improves lm/W efficacy and increases LED service life.

WE-EF Control

WE-EF Control versions offer professional solutions to a multitude of applications, enabling the operator to minimise cost of ownership while maximising environmental credentials. Contact WE-EF or your local WE-EF representative for an individual solution designed to meet your demands.

Surge Protection

In Australia and New Zealand WE-EF street and area lighting luminaires are supplied with remote or integral high voltage surge protection devices of 10 kV.

For comprehensive protection of a luminaire installation against lightning and electrical surges, it is essential to also cover mains supply and data input lines at the distribution board level, by using respective primary (Type 1) and secondary (Type 2) surge arrestors.

AVAILABLE CONTROL OPTIONS FOR VFL500 AND VFL500X SERIES

| VFL500 LED Series | Basic +0001 | Motion +0010 | Advanced +0002 | DALI +0013 | 1-10V +0011 |
|-------------------------------|-------------|--------------|----------------|------------|-------------|
| VFL520 LED 350 mA / 700 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL530 LED 350 mA / 700 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL540 LED 350 mA / 700 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL530-SE LED 350 mA / 700 mA | ✓ | – | ✓ | ✓ | ✓ |
| VFL540-SE LED 350 mA / 700 mA | ✓ | – | ✓ | ✓ | ✓ |
| VFL500X LED Series | | | | | |
| VFL530X LED 700 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL540X LED 700 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL530X 12 LEDs 1050 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL530X 24 LEDs 1050 mA | ✓ | – | – | ✓ | ✓ |
| VFL530X-SE LED 700 mA | ✓ | – | ✓ | ✓ | ✓ |
| VFL540X-SE LED 700 mA | ✓ | – | ✓ | ✓ | ✓ |
| VFL540X LED 1050 mA | ✓ | ✓ | ✓ | ✓ | ✓ |
| VFL540X LED 1400 mA | – | – | – | – | ✓ |
| VFL530X-SE LED 1050 mA | ✓ | – | ✓ | ✓ | ✓ |
| VFL540X-SE LED 1050 mA | ✓ | – | ✓ | ✓ | ✓ |
| VFL540X-SE LED 1400 mA | – | – | – | – | ✓ |

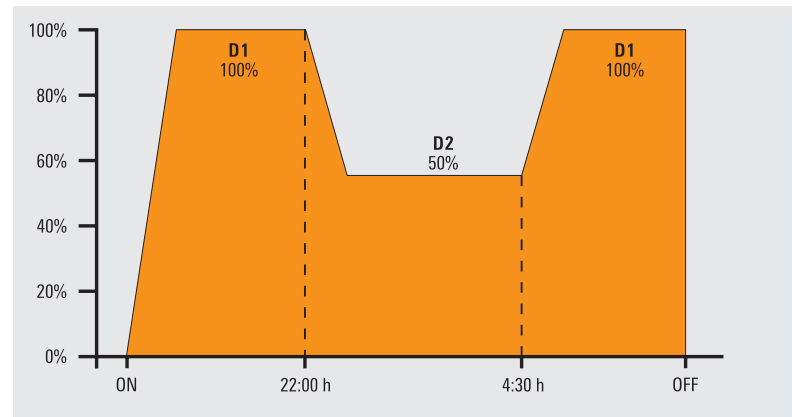


Basic

By activating an integral electronic control switch, both power consumption and luminous flux are reduced to a pre-programmed level. Factory programmed setting: Power consumption is reduced to 45 per cent, luminous flux to 50 per cent. Other settings available on request. Requires dedicated control line (in addition to standard mains supply lines).

Motion

Triggered by a movement sensor, an integral, pre-programmed electronic controller raises the luminaire's power and light output to 100 per cent. After five minutes of non-movement, power consumption is reduced to 45 per cent, luminous flux to 50 per cent. Other settings on request. Requires movement sensor in external housing – mounted on pole or separate structure – as well as dedicated control line (in addition to standard mains supply lines).



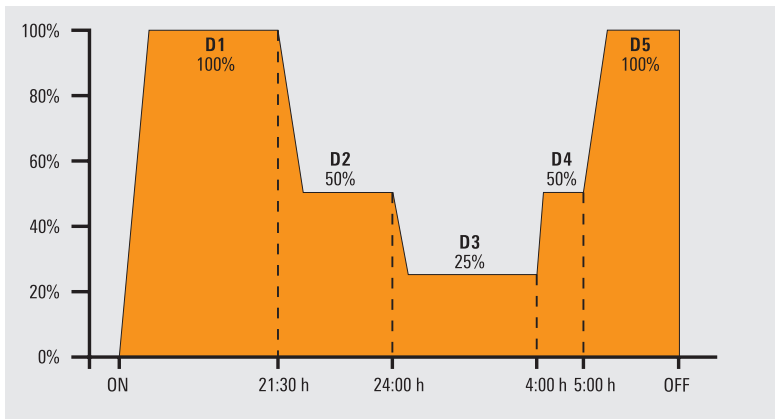
WE-EF Control Basic. This system has been designed to operate during the time between 'on' and 'off' as defined by the user (for example, employing a time clock or a photocell). 50 per cent dimming (D2) during low volume traffic hours is activated/de-activated via a dedicated control line.



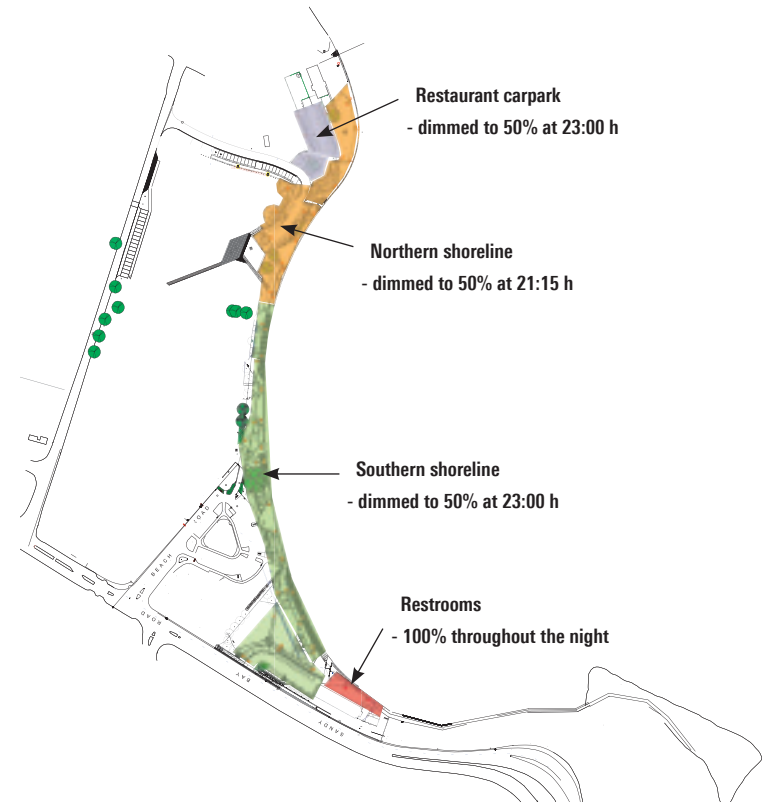
Mundy Street. Mentone (AUS).

Advanced

An integral, pre-programmed electronic controller activates a maximum of five different dimming levels covering five consecutive periods. Factory programmed settings: As per agreement. Luminaires are operated in stand-alone mode and can be individually reprogrammed on site by means of an optional, hand-held programmer. No dedicated control line required.



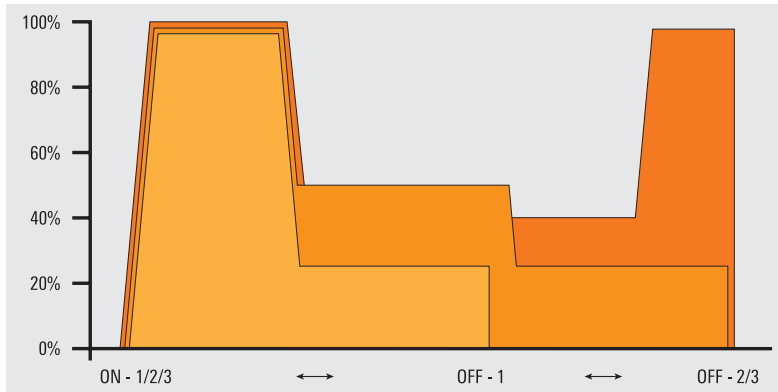
WE-EF Control Advanced. This system has been designed to operate during the time between 'on' and 'off' as defined by the user (for example, employing a time clock or a photocell). Up to five different dimming levels (D1-D5) can be individually programmed, for a maximum of five consecutive periods.



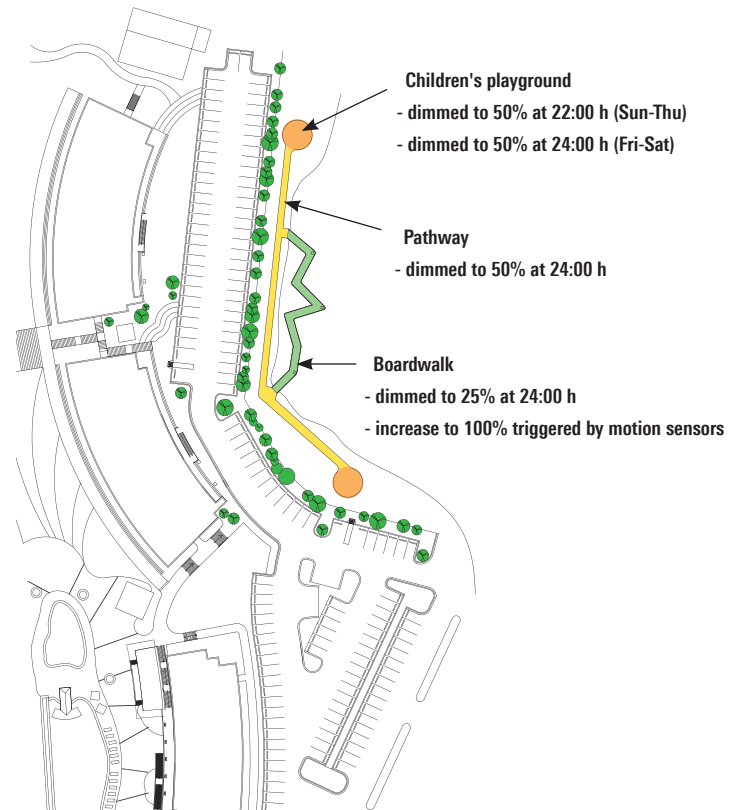
Sandy Bay, Hobart (AUS).

Dynamic

Intelligent lighting control and monitoring system. Bi-directional communication between luminaires and central data controller. Individual and groups of luminaires can both be programmed for routine and special event operations as well as automatic adjustment to external factors such as ambient illuminance. Features automatic failure alerts as well as monitoring of operational data such as voltage, current, power factor, power consumption, operating hours, temperature, etc. No dedicated control line required.

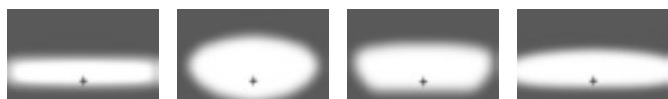


WE-EF Control Dynamic. This system has been designed for the flexible management of both simple and complex lighting installations. It allows for independent programming of both individual and multiple luminaires, on a routine or special event basis, as well as remote management through operational data feedback, alerts etc.



Riverwalk. Brisbane (AUS).

VFL500 SERIES



[P65]

[S60]

[S65]

[S70]

IOS® Innovative Optical System:

[P65] Pedestrian/bicycle lane distribution

[S60] Streetlighting distribution

[S65] Streetlighting distribution

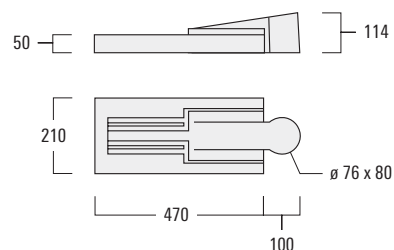
[S70] Streetlighting distribution

| [P65] | | 3000 K | lm | 4000 K | lm | kg |
|--------|-------------------|----------|------|----------|------|-----|
| VFL520 | 12 LED 12W/350 mA | 108-1500 | 1614 | 108-1501 | 1614 | 4.7 |
| VFL520 | 12 LED 24W/700 mA | 108-1502 | 2951 | 108-1503 | 2951 | 4.7 |
| VFL530 | 24 LED 24W/350 mA | 108-1556 | 3228 | 108-1557 | 3228 | 6.6 |
| VFL530 | 24 LED 48W/700 mA | 108-1558 | 5903 | 108-1559 | 5903 | 6.6 |

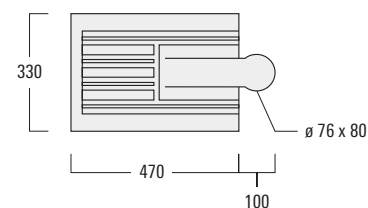
| [S60] | | 3000 K | lm | 4000 K | lm | kg |
|--------|-------------------|----------|-------|----------|-------|-----|
| VFL520 | 12 LED 12W/350 mA | 108-1480 | 1614 | 108-1481 | 1614 | 4.7 |
| VFL520 | 12 LED 24W/700 mA | 108-1482 | 2951 | 108-1483 | 2951 | 4.7 |
| VFL530 | 24 LED 24W/350 mA | 108-1153 | 3228 | 108-1154 | 3228 | 6.6 |
| VFL530 | 24 LED 48W/700 mA | 108-1168 | 5903 | 108-1169 | 5903 | 6.6 |
| VFL540 | 36 LED 36W/350 mA | 108-0846 | 4842 | 108-0877 | 4842 | 8.2 |
| VFL540 | 36 LED 72W/700 mA | 108-0908 | 8854 | 108-0907 | 8854 | 8.2 |
| VFL540 | 42 LED 42W/350 mA | 108-0850 | 5649 | 108-0879 | 5649 | 8.2 |
| VFL540 | 42 LED 84W/700 mA | 108-0914 | 10329 | 108-0913 | 10329 | 8.2 |

| [S65] | | 3000 K | lm | 4000 K | lm | kg |
|--------|-------------------|----------|-------|----------|-------|-----|
| VFL520 | 12 LED 12W/350 mA | 108-1484 | 1614 | 108-1485 | 1614 | 4.7 |
| VFL520 | 12 LED 24W/700 mA | 108-1486 | 2951 | 108-1487 | 2951 | 4.7 |
| VFL530 | 24 LED 24W/350 mA | 108-1162 | 3228 | 108-1163 | 3228 | 6.6 |
| VFL530 | 24 LED 48W/700 mA | 108-1177 | 5903 | 108-1178 | 5903 | 6.6 |
| VFL540 | 36 LED 36W/350 mA | 108-1085 | 4842 | 108-0969 | 4842 | 8.2 |
| VFL540 | 36 LED 72W/700 mA | 108-1087 | 8854 | 108-0970 | 8854 | 8.2 |
| VFL540 | 42 LED 42W/350 mA | 108-1089 | 5649 | 108-0971 | 5649 | 8.2 |
| VFL540 | 42 LED 84W/700 mA | 108-1091 | 10329 | 108-0972 | 10329 | 8.2 |

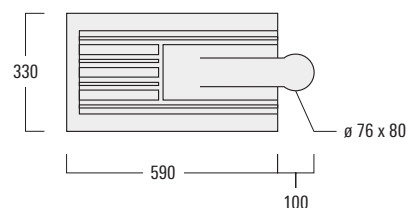
| [S70] | | 3000 K | lm | 4000 K | lm | kg |
|--------|-------------------|----------|-------|----------|-------|-----|
| VFL520 | 12 LED 12W/350 mA | 108-1488 | 1614 | 108-1489 | 1614 | 4.7 |
| VFL520 | 12 LED 24W/700 mA | 108-1490 | 2951 | 108-1491 | 2951 | 4.7 |
| VFL530 | 24 LED 24W/350 mA | 108-1156 | 3228 | 108-1157 | 3228 | 6.6 |
| VFL530 | 24 LED 48W/700 mA | 108-1171 | 5903 | 108-1172 | 5903 | 6.6 |
| VFL540 | 36 LED 36W/350 mA | 108-0858 | 4842 | 108-0883 | 4842 | 8.2 |
| VFL540 | 36 LED 72W/700 mA | 108-0911 | 8854 | 108-0910 | 8854 | 8.2 |
| VFL540 | 42 LED 42W/350 mA | 108-0862 | 5649 | 108-0885 | 5649 | 8.2 |
| VFL540 | 42 LED 84W/700 mA | 108-0917 | 10329 | 108-0916 | 10329 | 8.2 |



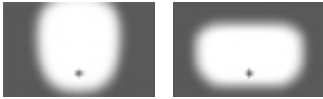
VFL520



VFL530



VFL540



[A60]

[R65]

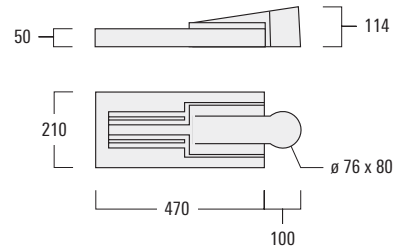
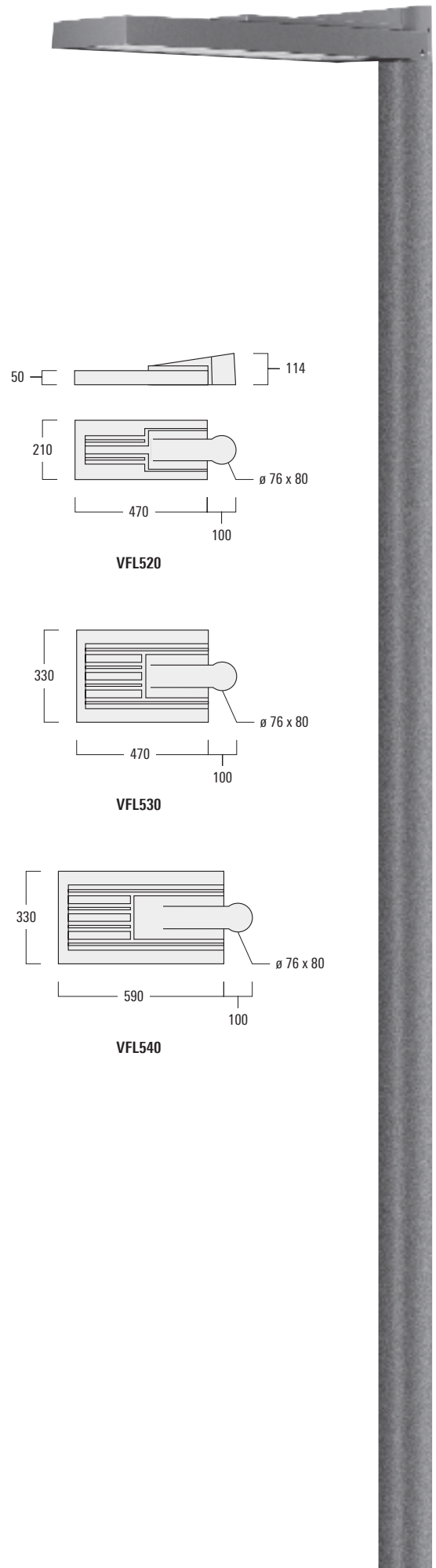
IOS® Innovative Optical System:

[A60] Asymmetric 'forward throw' distribution

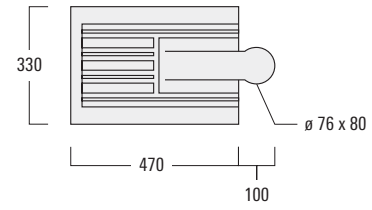
[R65] Rectangular 'forward throw' distribution

| [A60] | | 3000 K | lm | 4000 K | lm | kg |
|--------|-------------------|----------|-------|----------|-------|-----|
| VFL520 | 12 LED 12W/350 mA | 108-1496 | 1614 | 108-1497 | 1614 | 4.7 |
| VFL520 | 12 LED 24W/700 mA | 108-1498 | 2951 | 108-1499 | 2951 | 4.7 |
| VFL530 | 24 LED 24W/350 mA | 108-1159 | 3228 | 108-1160 | 3228 | 6.6 |
| VFL530 | 24 LED 48W/700 mA | 108-1174 | 5903 | 108-1175 | 5903 | 6.6 |
| VFL540 | 36 LED 36W/350 mA | 108-1061 | 4842 | 108-0929 | 4842 | 8.2 |
| VFL540 | 36 LED 72W/700 mA | 108-1063 | 8854 | 108-0941 | 8854 | 8.2 |
| VFL540 | 42 LED 42W/350 mA | 108-1065 | 5649 | 108-0932 | 5649 | 8.2 |
| VFL540 | 42 LED 84W/700 mA | 108-1067 | 10329 | 108-0944 | 10329 | 8.2 |

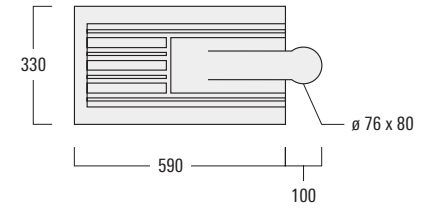
| [R65] | | 3000 K | lm | 4000 K | lm | kg |
|--------|-------------------|----------|-------|----------|-------|-----|
| VFL520 | 12 LED 12W/350 mA | 108-1492 | 1614 | 108-1493 | 1614 | 4.7 |
| VFL520 | 12 LED 24W/700 mA | 108-1494 | 2951 | 108-1495 | 2951 | 4.7 |
| VFL530 | 24 LED 24W/350 mA | 108-1165 | 3228 | 108-1166 | 3228 | 6.6 |
| VFL530 | 24 LED 48W/700 mA | 108-1180 | 5903 | 108-1181 | 5903 | 6.6 |
| VFL540 | 36 LED 36W/350 mA | 108-1073 | 4842 | 108-0975 | 4842 | 8.2 |
| VFL540 | 36 LED 72W/700 mA | 108-1075 | 8854 | 108-0976 | 8854 | 8.2 |
| VFL540 | 42 LED 42W/350 mA | 108-1077 | 5649 | 108-0977 | 5649 | 8.2 |
| VFL540 | 42 LED 84W/700 mA | 108-1079 | 10329 | 108-0978 | 10329 | 8.2 |



VFL520

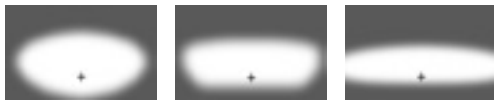


VFL530



VFL540

VFL500-SE SERIES



[S60]

[S65]

[S70]

IOS® Innovative Optical System:

[S60] Streetlighting distribution

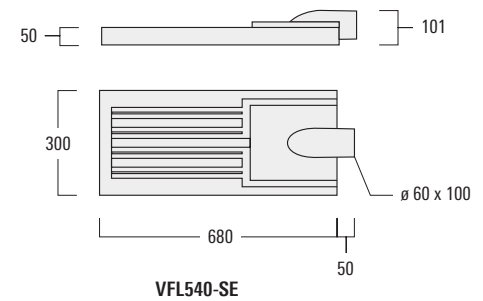
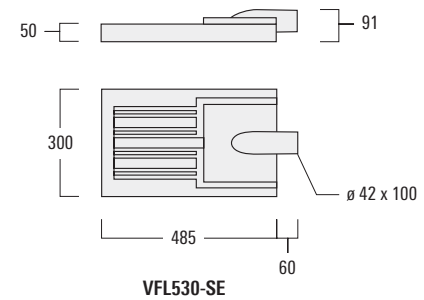
[S65] Streetlighting distribution

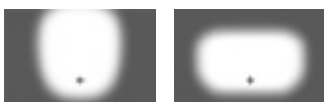
[S70] Streetlighting distribution

| [S60] | | 3000 K | lm | 4000 K | lm | kg |
|-----------|-------------------|----------|-------|----------|-------|-----|
| VFL530-SE | 12 LED 12W/350 mA | 108-1317 | 1614 | 108-1318 | 1614 | 5.6 |
| VFL530-SE | 12 LED 24W/700 mA | 108-1297 | 2951 | 108-1298 | 2951 | 5.6 |
| VFL530-SE | 24 LED 24W/350 mA | 108-1307 | 3228 | 108-1308 | 3228 | 5.8 |
| VFL530-SE | 24 LED 48W/700 mA | 108-1287 | 5903 | 108-1288 | 5903 | 5.8 |
| VFL540-SE | 36 LED 36W/350 mA | 108-1267 | 4842 | 108-1268 | 4842 | 8.2 |
| VFL540-SE | 36 LED 72W/700 mA | 108-1247 | 8854 | 108-1248 | 8854 | 8.2 |
| VFL540-SE | 48 LED 48W/350 mA | 108-1277 | 6456 | 108-1278 | 6456 | 8.2 |
| VFL540-SE | 48 LED 96W/700 mA | 108-1257 | 11805 | 108-1258 | 11805 | 8.2 |

| [S65] | | 3000 K | lm | 4000 K | lm | kg |
|-----------|-------------------|----------|-------|----------|-------|-----|
| VFL530-SE | 12 LED 12W/350 mA | 108-1323 | 1614 | 108-1324 | 1614 | 5.6 |
| VFL530-SE | 12 LED 24W/700 mA | 108-1303 | 2951 | 108-1304 | 2951 | 5.6 |
| VFL530-SE | 24 LED 24W/350 mA | 108-1313 | 3228 | 108-1314 | 3228 | 5.8 |
| VFL530-SE | 24 LED 48W/700 mA | 108-1293 | 5903 | 108-1294 | 5903 | 5.8 |
| VFL540-SE | 36 LED 36W/350 mA | 108-1273 | 4842 | 108-1274 | 4842 | 8.2 |
| VFL540-SE | 36 LED 72W/700 mA | 108-1253 | 8854 | 108-1254 | 8854 | 8.2 |
| VFL540-SE | 48 LED 48W/350 mA | 108-1283 | 6456 | 108-1284 | 6456 | 8.2 |
| VFL540-SE | 48 LED 96W/700 mA | 108-1263 | 11805 | 108-1264 | 11805 | 8.2 |

| [S70] | | 3000 K | lm | 4000 K | lm | kg |
|-----------|-------------------|----------|-------|----------|-------|-----|
| VFL530-SE | 12 LED 12W/350 mA | 108-1319 | 1614 | 108-1320 | 1614 | 5.6 |
| VFL530-SE | 12 LED 24W/700 mA | 108-1299 | 2951 | 108-1300 | 2951 | 5.6 |
| VFL530-SE | 24 LED 24W/350 mA | 108-1309 | 3228 | 108-1310 | 3228 | 5.8 |
| VFL530-SE | 24 LED 48W/700 mA | 108-1289 | 5903 | 108-1290 | 5903 | 5.8 |
| VFL540-SE | 36 LED 36W/350 mA | 108-1269 | 4842 | 108-1270 | 4842 | 8.2 |
| VFL540-SE | 36 LED 72W/700 mA | 108-1249 | 8854 | 108-1250 | 8854 | 8.2 |
| VFL540-SE | 48 LED 48W/350 mA | 108-1279 | 6456 | 108-1280 | 6456 | 8.2 |
| VFL540-SE | 48 LED 96W/700 mA | 108-1259 | 11805 | 108-1260 | 11805 | 8.2 |





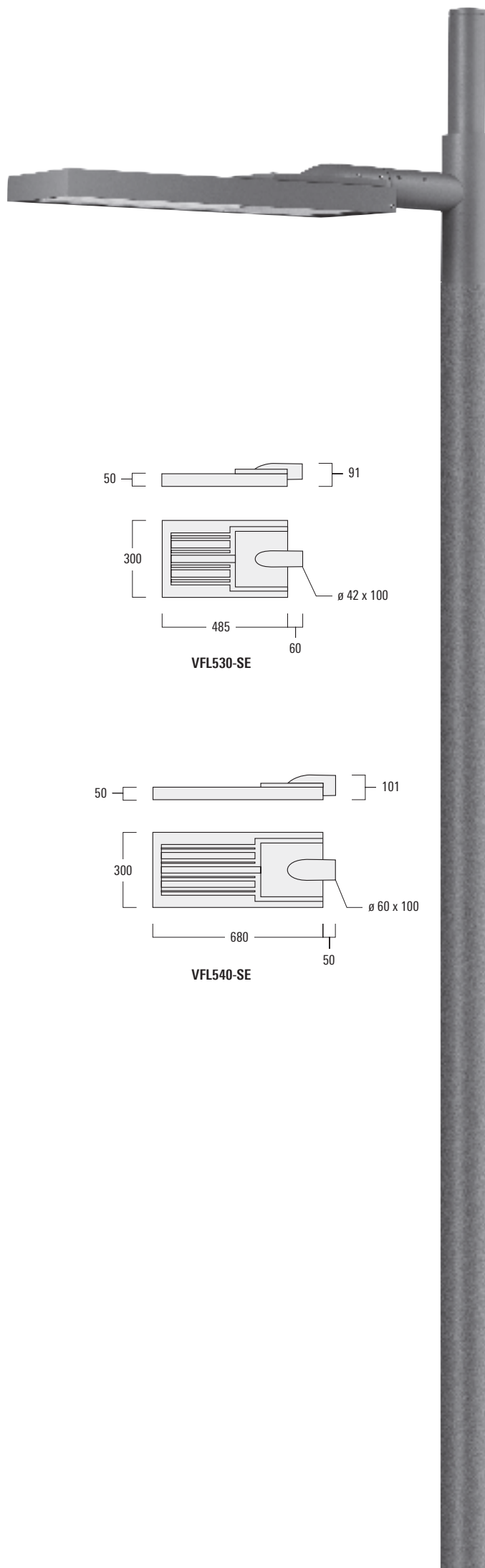
[A60]

[R65]

IOS® Innovative Optical System:

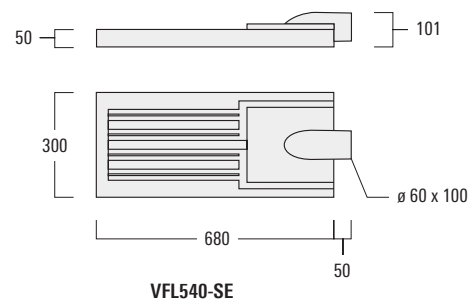
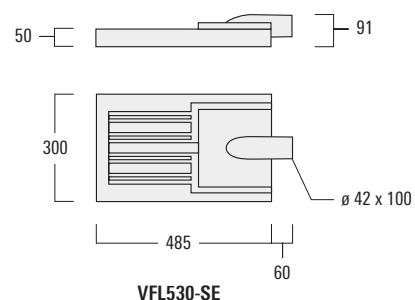
[A60] Asymmetric 'forward throw' distribution

[R65] Rectangular 'forward throw' distribution

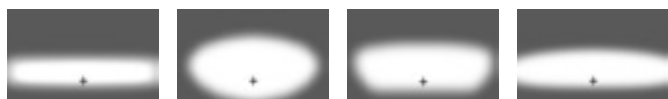


| [A60] | | 3000 K | lm | 4000 K | lm | kg |
|-----------|-------------------|----------|-------|----------|-------|-----|
| VFL530-SE | 12 LED 12W/350 mA | 108-1321 | 1614 | 108-1322 | 1614 | 5.6 |
| VFL530-SE | 12 LED 24W/700 mA | 108-1301 | 2951 | 108-1302 | 2951 | 5.6 |
| VFL530-SE | 24 LED 24W/350 mA | 108-1311 | 3228 | 108-1312 | 3228 | 5.8 |
| VFL530-SE | 24 LED 48W/700 mA | 108-1291 | 5903 | 108-1292 | 5903 | 5.8 |
| VFL540-SE | 36 LED 36W/350 mA | 108-1271 | 4842 | 108-1272 | 4842 | 8.2 |
| VFL540-SE | 36 LED 72W/700 mA | 108-1251 | 8854 | 108-1252 | 8854 | 8.2 |
| VFL540-SE | 48 LED 48W/350 mA | 108-1281 | 6456 | 108-1282 | 6456 | 8.2 |
| VFL540-SE | 48 LED 96W/700 mA | 108-1261 | 11805 | 108-1262 | 11805 | 8.2 |

| [R65] | | 3000 K | lm | 4000 K | lm | kg |
|-----------|-------------------|----------|-------|----------|-------|-----|
| VFL530-SE | 12 LED 12W/350 mA | 108-1325 | 1614 | 108-1326 | 1614 | 5.6 |
| VFL530-SE | 12 LED 24W/700 mA | 108-1305 | 2951 | 108-1306 | 2951 | 5.6 |
| VFL530-SE | 24 LED 24W/350 mA | 108-1315 | 3228 | 108-1316 | 3228 | 5.8 |
| VFL530-SE | 24 LED 48W/700 mA | 108-1295 | 5903 | 108-1296 | 5903 | 5.8 |
| VFL540-SE | 36 LED 36W/350 mA | 108-1275 | 4842 | 108-1276 | 4842 | 8.2 |
| VFL540-SE | 36 LED 72W/700 mA | 108-1255 | 8854 | 108-1256 | 8854 | 8.2 |
| VFL540-SE | 48 LED 48W/350 mA | 108-1285 | 6456 | 108-1286 | 6456 | 8.2 |
| VFL540-SE | 48 LED 96W/700 mA | 108-1265 | 11805 | 108-1266 | 11805 | 8.2 |



VFL500X SERIES



[P65]

[S60]

[S65]

[S70]

IOS® Innovative Optical System:

[P65] Pedestrian/bicycle lane distribution

[S60] Streetlighting distribution

[S65] Streetlighting distribution

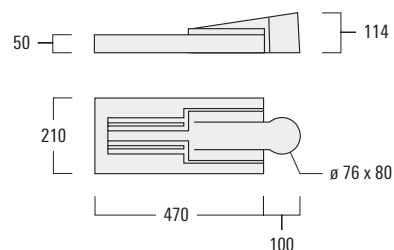
[S70] Streetlighting distribution

| [P65] | | 3000 K | lm | 4000 K | lm | kg |
|---------|--------------------|----------|------|----------|-------|-----|
| VFL530X | 12 LED 24W/700 mA | 108-5000 | 3224 | 108-8360 | 3720 | 6.6 |
| VFL530X | 12 LED 36W/1050 mA | 108-5001 | 4680 | 108-8361 | 5400 | 6.6 |
| VFL530X | 24 LED 48W/700 mA | 108-5002 | 6448 | 108-8362 | 7440 | 6.6 |
| VFL530X | 24 LED 72W/1050 mA | 108-5003 | 9360 | 108-8363 | 10800 | 6.6 |

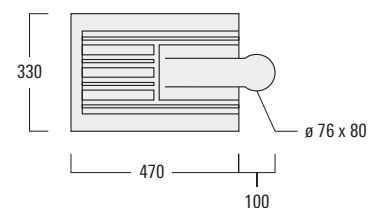
| [S60] | | 3000 K | lm | 4000 K | lm | kg |
|---------|---------------------|----------|-------|----------|-------|-----|
| VFL530X | 12 LED 24W/700 mA | 108-5004 | 3224 | 108-8364 | 3720 | 6.6 |
| VFL530X | 12 LED 36W/1050 mA | 108-5005 | 4680 | 108-8365 | 5400 | 6.6 |
| VFL530X | 24 LED 48W/700 mA | 108-5006 | 6448 | 108-8366 | 7440 | 6.6 |
| VFL530X | 24 LED 72W/1050 mA | 108-5007 | 9360 | 108-8367 | 10800 | 6.6 |
| VFL540X | 24 LED 48W/700 mA | 108-5008 | 6448 | 108-8368 | 7440 | 8.2 |
| VFL540X | 24 LED 72W/1050 mA | 108-5009 | 9360 | 108-8369 | 10800 | 8.2 |
| VFL540X | 36 LED 72W/700 mA | 108-5010 | 9672 | 108-8370 | 11160 | 8.2 |
| VFL540X | 36 LED 108W/1050 mA | 108-5011 | 14040 | 108-8371 | 16200 | 8.2 |
| VFL540X | 42 LED 84W/700 mA | 108-5012 | 11284 | 108-8372 | 13020 | 8.2 |
| VFL540X | 42 LED 126W/1050 mA | 108-5013 | 16380 | 108-8373 | 18900 | 8.2 |
| VFL540X | 42 LED 181W/1400 mA | 108-5014 | 20950 | 108-8374 | 24173 | 8.2 |

| [S65] | | 3000 K | lm | 4000 K | lm | kg |
|---------|---------------------|----------|-------|----------|-------|-----|
| VFL530X | 12 LED 24W/700 mA | 108-5015 | 3224 | 108-8375 | 3720 | 6.6 |
| VFL530X | 12 LED 36W/1050 mA | 108-5016 | 4680 | 108-8376 | 5400 | 6.6 |
| VFL530X | 24 LED 48W/700 mA | 108-5017 | 6448 | 108-8377 | 7440 | 6.6 |
| VFL530X | 24 LED 72W/1050 mA | 108-5018 | 9360 | 108-8378 | 10800 | 6.6 |
| VFL540X | 24 LED 48W/700 mA | 108-5019 | 6448 | 108-8379 | 7440 | 8.2 |
| VFL540X | 24 LED 72W/1050 mA | 108-5020 | 9360 | 108-8380 | 10800 | 8.2 |
| VFL540X | 36 LED 72W/700 mA | 108-5021 | 9672 | 108-8381 | 11160 | 8.2 |
| VFL540X | 36 LED 108W/1050 mA | 108-5022 | 14040 | 108-8382 | 16200 | 8.2 |
| VFL540X | 42 LED 84W/700 mA | 108-5023 | 11284 | 108-8383 | 13020 | 8.2 |
| VFL540X | 42 LED 126W/1050 mA | 108-5024 | 16380 | 108-8972 | 18900 | 8.2 |
| VFL540X | 42 LED 181W/1400 mA | 108-5025 | 20950 | 108-8384 | 24173 | 8.2 |

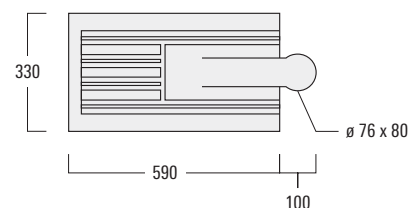
| [S70] | | 3000 K | lm | 4000 K | lm | kg |
|---------|---------------------|----------|-------|----------|-------|-----|
| VFL530X | 12 LED 24W/700 mA | 108-5026 | 3224 | 108-8385 | 3720 | 6.6 |
| VFL530X | 12 LED 36W/1050 mA | 108-5027 | 4680 | 108-8386 | 5400 | 6.6 |
| VFL530X | 24 LED 48W/700 mA | 108-5028 | 6448 | 108-8387 | 7440 | 6.6 |
| VFL530X | 24 LED 72W/1050 mA | 108-5029 | 9360 | 108-8388 | 10800 | 6.6 |
| VFL540X | 24 LED 48W/700 mA | 108-5030 | 6448 | 108-8389 | 7440 | 8.2 |
| VFL540X | 24 LED 72W/1050 mA | 108-5031 | 9360 | 108-8390 | 10800 | 8.2 |
| VFL540X | 36 LED 72W/700 mA | 108-5032 | 9672 | 108-8391 | 11160 | 8.2 |
| VFL540X | 36 LED 108W/1050 mA | 108-5033 | 14040 | 108-8392 | 16200 | 8.2 |
| VFL540X | 42 LED 84W/700 mA | 108-5034 | 11284 | 108-8393 | 13020 | 8.2 |
| VFL540X | 42 LED 126W/1050 mA | 108-5035 | 16380 | 108-8394 | 18900 | 8.2 |
| VFL540X | 42 LED 181W/1400 mA | 108-5036 | 20950 | 108-8395 | 24173 | 8.2 |



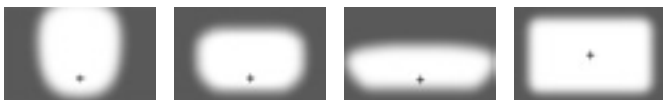
VFL520



VFL530



VFL540



[A60]

[R65]

[V]

[Q]

IOS® Innovative Optical System:

[A60] Asymmetric 'forward throw' distribution

[R65] Rectangular 'forward throw' distribution

[V] Asymmetric 'roadlighting' distribution

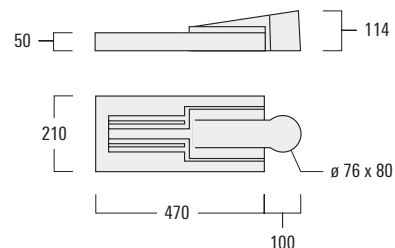
[Q] Rectangular distribution for area lighting

| [A60] | | 3000 K | lm | 4000 K | lm | kg |
|---------|---------------------|----------|-------|----------|-------|-----|
| VFL530X | 12 LED 24W/700 mA | 108-5037 | 3224 | 108-8396 | 3720 | 6.6 |
| VFL530X | 12 LED 36W/1050 mA | 108-5038 | 4680 | 108-8397 | 5400 | 6.6 |
| VFL530X | 24 LED 48W/700 mA | 108-5039 | 6448 | 108-8398 | 7440 | 6.6 |
| VFL530X | 24 LED 72W/1050 mA | 108-5040 | 9360 | 108-8399 | 10800 | 6.6 |
| VFL540X | 24 LED 48W/700 mA | 108-5041 | 6448 | 108-8460 | 7440 | 8.2 |
| VFL540X | 24 LED 72W/1050 mA | 108-5042 | 9360 | 108-8461 | 10800 | 8.2 |
| VFL540X | 36 LED 72W/700 mA | 108-5043 | 9672 | 108-8462 | 11160 | 8.2 |
| VFL540X | 36 LED 108W/1050 mA | 108-5044 | 14040 | 108-8463 | 16200 | 8.2 |
| VFL540X | 42 LED 84W/700 mA | 108-5045 | 11284 | 108-8464 | 13020 | 8.2 |
| VFL540X | 42 LED 126W/1050 mA | 108-5046 | 16380 | 108-8932 | 18900 | 8.2 |
| VFL540X | 42 LED 181W/1400 mA | 108-5047 | 20950 | 108-8465 | 24173 | 8.2 |

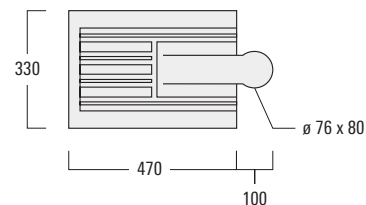
| [R65] | | 3000 K | lm | kg |
|---------|---------------------|----------|-------|--------------------|
| VFL530X | 12 LED 24W/700 mA | 108-5048 | 3224 | 108-8466 3720 6.6 |
| VFL530X | 12 LED 36W/1050 mA | 108-5049 | 4680 | 108-8467 5400 6.6 |
| VFL530X | 24 LED 48W/700 mA | 108-5050 | 6448 | 108-8468 7440 6.6 |
| VFL530X | 24 LED 72W/1050 mA | 108-5051 | 9360 | 108-8469 10800 6.6 |
| VFL540X | 24 LED 48W/700 mA | 108-5052 | 6448 | 108-8530 7440 8.2 |
| VFL540X | 24 LED 72W/1050 mA | 108-5053 | 9360 | 108-8531 10800 8.2 |
| VFL540X | 36 LED 72W/700 mA | 108-5054 | 9672 | 108-8532 11160 8.2 |
| VFL540X | 36 LED 108W/1050 mA | 108-5055 | 14040 | 108-8533 16200 8.2 |
| VFL540X | 42 LED 84W/700 mA | 108-5056 | 11284 | 108-8534 13020 8.2 |
| VFL540X | 42 LED 126W/1050 mA | 108-5057 | 16380 | 108-8978 18900 8.2 |
| VFL540X | 42 LED 181W/1400 mA | 108-5058 | 20950 | 108-8535 24173 8.2 |

| [V] | | 3000 K | lm | 4000 K | lm | kg |
|---------|---------------------|----------|-------|----------|-------|-----|
| VFL540X | 42 LED 126W/1050 mA | 108-5059 | 16380 | 108-8536 | 18900 | 8.2 |
| VFL540X | 42 LED 181W/1400 mA | 108-5060 | 20950 | 108-8537 | 24173 | 8.2 |

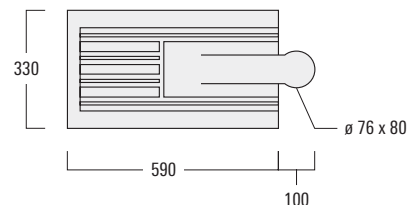
| [Q] | | 3000 K | lm | 4000 K | lm | kg |
|---------|---------------------|----------|-------|----------|-------|-----|
| VFL530X | 24 LED 72W/1050 mA | 108-5061 | 16380 | 108-8538 | 10800 | 6.6 |
| VFL540X | 24 LED 72W/1050 mA | 108-5062 | 16380 | 108-8539 | 10800 | 8.2 |
| VFL540X | 36 LED 108W/1050 mA | 108-5063 | 14040 | 108-8560 | 16200 | 8.2 |



VFL520

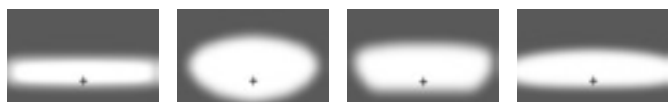


VFL530



VFL540

VFL500X-SE SERIES



[P65] [S60] [S65] [S70]

IOS® Innovative Optical System:

[P65] Pedestrian/bicycle lane distribution

[S60] Streetlighting distribution

[S65] Streetlighting distribution

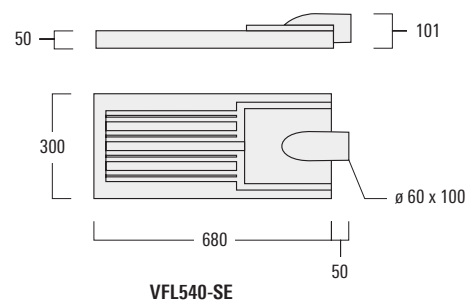
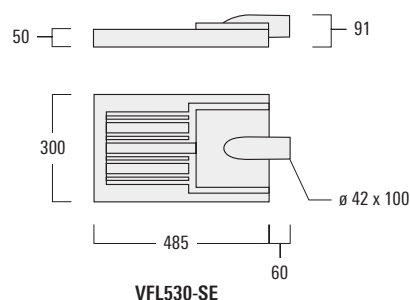
[S70] Streetlighting distribution

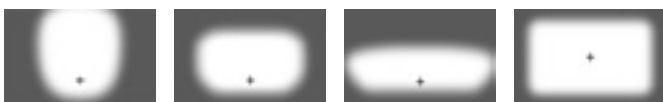
| [P65] | | 3000 K | lm | 4000 K | lm | kg |
|------------|--------------------|----------|------|----------|-------|-----|
| VFL530X-SE | 12 LED 24W/700 mA | 108-5064 | 3224 | 108-8561 | 3720 | 5.6 |
| VFL530X-SE | 12 LED 36W/1050 mA | 108-5065 | 4680 | 108-8562 | 5400 | 5.6 |
| VFL530X-SE | 24 LED 48W/700 mA | 108-5066 | 6448 | 108-8563 | 7440 | 5.8 |
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5067 | 9360 | 108-8564 | 10800 | 5.8 |

| [S60] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL530X-SE | 12 LED 24W/700 mA | 108-5068 | 3224 | 108-8565 | 3720 | 5.6 |
| VFL530X-SE | 12 LED 36W/1050 mA | 108-5069 | 4680 | 108-8566 | 5400 | 5.6 |
| VFL530X-SE | 24 LED 48W/700 mA | 108-5070 | 6448 | 108-8567 | 7440 | 5.8 |
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5071 | 9360 | 108-8568 | 10800 | 5.8 |
| VFL540X-SE | 24 LED 48W/700 mA | 108-5072 | 6448 | 108-8569 | 7440 | 8.2 |
| VFL540X-SE | 24 LED 72W/1050 mA | 108-5073 | 9360 | 108-8580 | 10800 | 8.2 |
| VFL540X-SE | 36 LED 72W/700 mA | 108-5074 | 9672 | 108-8581 | 11160 | 8.2 |
| VFL540X-SE | 36 LED 108W/1050 mA | 108-5075 | 14040 | 108-8582 | 16200 | 8.2 |
| VFL540X-SE | 48 LED 96W/700 mA | 108-5076 | 12896 | 108-8583 | 14880 | 8.2 |
| VFL540X-SE | 48 LED 144W/1050 mA | 108-8274 | 18720 | 108-8265 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5077 | 23943 | 108-8584 | 27626 | 8.2 |

| [S65] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL530X-SE | 12 LED 24W/700 mA | 108-5078 | 3224 | 108-8585 | 3720 | 5.6 |
| VFL530X-SE | 12 LED 36W/1050 mA | 108-5079 | 4680 | 108-8586 | 5400 | 5.6 |
| VFL530X-SE | 24 LED 48W/700 mA | 108-5080 | 6448 | 108-8587 | 7440 | 5.8 |
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5081 | 9360 | 108-8588 | 10800 | 5.8 |
| VFL540X-SE | 24 LED 48W/700 mA | 108-5082 | 6448 | 108-8589 | 7440 | 8.2 |
| VFL540X-SE | 24 LED 72W/1050 mA | 108-5083 | 9360 | 108-8922 | 10800 | 8.2 |
| VFL540X-SE | 36 LED 72W/700 mA | 108-5084 | 9672 | 108-8590 | 11160 | 8.2 |
| VFL540X-SE | 36 LED 108W/1050 mA | 108-5085 | 14040 | 108-8591 | 16200 | 8.2 |
| VFL540X-SE | 48 LED 96W/700 mA | 108-5086 | 12896 | 108-8592 | 14880 | 8.2 |
| VFL540X-SE | 48 LED 144W/1050 mA | 108-8273 | 18720 | 108-8264 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5087 | 23943 | 108-8593 | 27626 | 8.2 |

| [S70] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL530X-SE | 12 LED 24W/700 mA | 108-5088 | 3224 | 108-8594 | 3720 | 5.6 |
| VFL530X-SE | 12 LED 36W/1050 mA | 108-5089 | 4680 | 108-8595 | 5400 | 5.6 |
| VFL530X-SE | 24 LED 48W/700 mA | 108-5090 | 6448 | 108-8596 | 7440 | 5.8 |
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5091 | 9360 | 108-8597 | 10800 | 5.8 |
| VFL540X-SE | 24 LED 48W/700 mA | 108-5092 | 6448 | 108-8598 | 7440 | 8.2 |
| VFL540X-SE | 24 LED 72W/1050 mA | 108-5093 | 9360 | 108-8599 | 10800 | 8.2 |
| VFL540X-SE | 36 LED 72W/700 mA | 108-5094 | 9672 | 108-8601 | 11160 | 8.2 |
| VFL540X-SE | 36 LED 108W/1050 mA | 108-5095 | 14040 | 108-8602 | 16200 | 8.2 |
| VFL540X-SE | 48 LED 96W/700 mA | 108-5096 | 12896 | 108-8603 | 14880 | 8.2 |
| VFL540X-SE | 48 LED 144W/1050 mA | 108-8271 | 18720 | 108-8261 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5097 | 23943 | 108-8604 | 27626 | 8.2 |





[A60] [R65] [V] [Q]

IOS® Innovative Optical System:

[A60] Asymmetric 'forward throw' distribution

[R65] Rectangular 'forward throw' distribution

[V] Asymmetric 'roadlighting' distribution

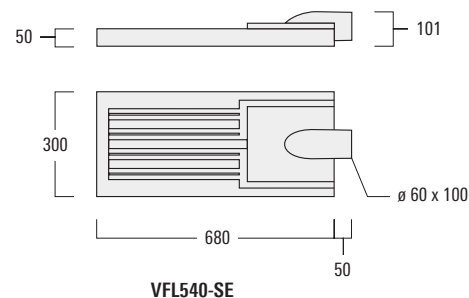
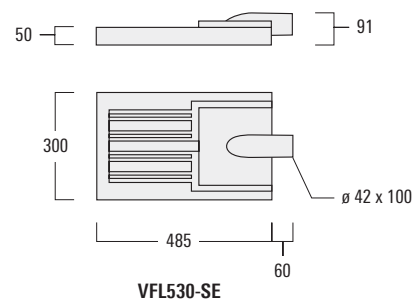
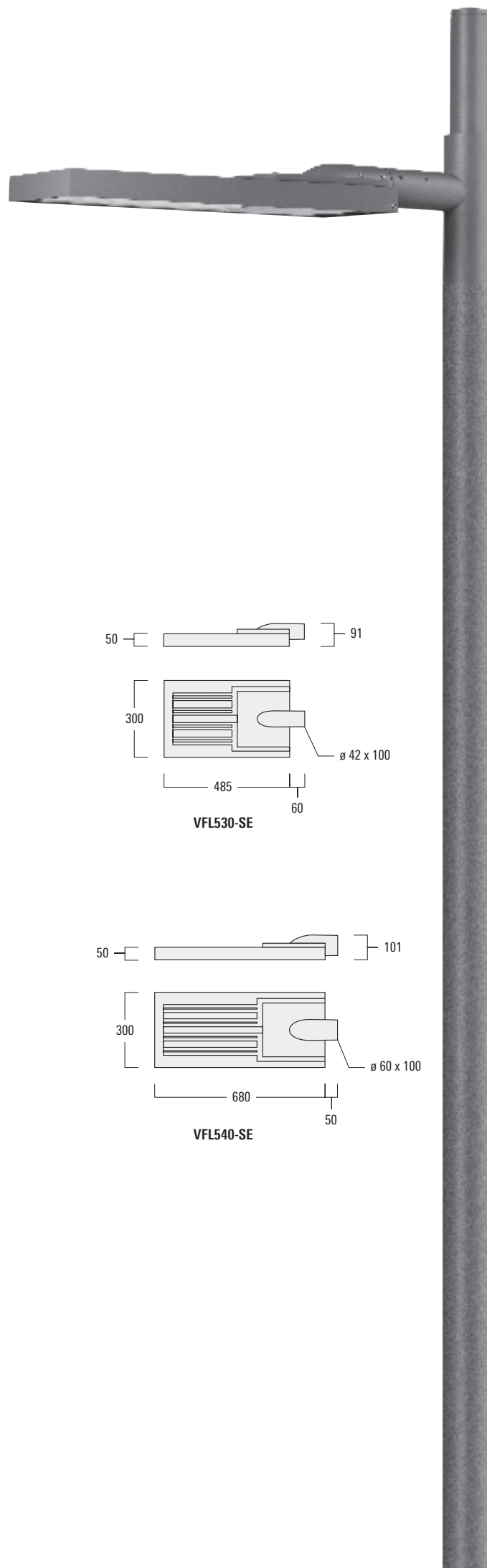
[Q] Rectangular distribution for area lighting

| [A60] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL530X-SE | 12 LED 24W/700 mA | 108-5098 | 3224 | 108-8605 | 3720 | 5.6 |
| VFL530X-SE | 12 LED 36W/1050 mA | 108-5099 | 4680 | 108-8606 | 5400 | 5.6 |
| VFL530X-SE | 24 LED 48W/700 mA | 108-5100 | 6448 | 108-8607 | 7440 | 5.8 |
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5101 | 9360 | 108-8608 | 10800 | 5.8 |
| VFL540X-SE | 24 LED 48W/700 mA | 108-5102 | 6448 | 108-8609 | 7440 | 8.2 |
| VFL540X-SE | 24 LED 72W/1050 mA | 108-5103 | 9360 | 108-8610 | 10800 | 8.2 |
| VFL540X-SE | 36 LED 72W/700 mA | 108-5104 | 9672 | 108-8611 | 11160 | 8.2 |
| VFL540X-SE | 36 LED 108W/1050 mA | 108-5105 | 14040 | 108-8612 | 16200 | 8.2 |
| VFL540X-SE | 48 LED 96W/700 mA | 108-8272 | 12896 | 108-8613 | 14880 | 8.2 |
| VFL540X-SE | 48 LED 144W/1050 mA | 108-5106 | 18720 | 108-8266 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5107 | 23943 | 108-9075 | 27626 | 8.2 |

| [R65] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL530X-SE | 12 LED 24W/700 mA | 108-5108 | 3224 | 108-8615 | 3720 | 5.6 |
| VFL530X-SE | 12 LED 36W/1050 mA | 108-5109 | 4680 | 108-8616 | 5400 | 5.6 |
| VFL530X-SE | 24 LED 48W/700 mA | 108-5110 | 6448 | 108-8617 | 7440 | 5.8 |
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5111 | 9360 | 108-8618 | 10800 | 5.8 |
| VFL540X-SE | 24 LED 48W/700 mA | 108-5112 | 6448 | 108-8619 | 7440 | 8.2 |
| VFL540X-SE | 24 LED 72W/1050 mA | 108-5113 | 9360 | 108-8920 | 10800 | 8.2 |
| VFL540X-SE | 36 LED 72W/700 mA | 108-5114 | 9672 | 108-8925 | 11160 | 8.2 |
| VFL540X-SE | 36 LED 108W/1050 mA | 108-5115 | 14040 | 108-8267 | 16200 | 8.2 |
| VFL540X-SE | 48 LED 96W/700 mA | 108-5116 | 12896 | 108-8620 | 14880 | 8.2 |
| VFL540X-SE | 48 LED 144W/1050 mA | 108-8994 | 18720 | 108-8995 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5117 | 23943 | 108-8621 | 27626 | 8.2 |

| [V] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL540X-SE | 48 LED 144W/1050 mA | 108-5118 | 18720 | 108-8622 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5119 | 23943 | 108-8623 | 27626 | 8.2 |

| [Q] | | 3000 K | lm | 4000 K | lm | kg |
|------------|---------------------|----------|-------|----------|-------|-----|
| VFL530X-SE | 24 LED 72W/1050 mA | 108-5120 | 9360 | 108-8624 | 10800 | 6.6 |
| VFL540X-SE | 24 LED 72W/1050 mA | 108-5121 | 9360 | 108-8625 | 10800 | 8.2 |
| VFL540X-SE | 36 LED 108W/1050 mA | 108-5122 | 14040 | 108-8626 | 16200 | 8.2 |
| VFL540X-SE | 48 LED 144W/1050 mA | 108-5123 | 18720 | 108-8627 | 21600 | 8.2 |
| VFL540X-SE | 48 LED 207W/1400 mA | 108-5124 | 23943 | 108-8628 | 27626 | 8.2 |

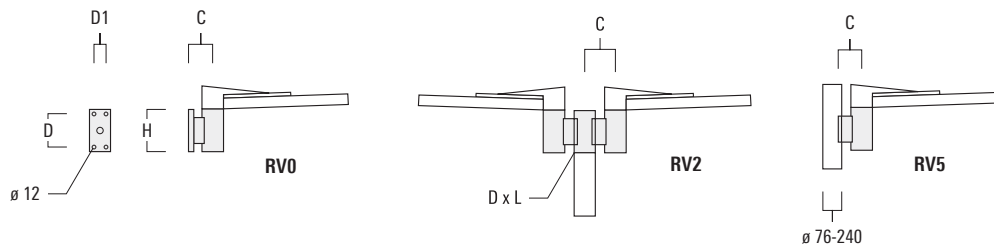


ACCESSORIES

VFL500 SERIES

| Wall bracket | | | D | D1 | H | C | kg |
|--------------|--------------------|-----------------|-----|----|-----|-----|-----|
| RV0 | for VFL520/530/540 | 108-0979 | 160 | 60 | 200 | 108 | 2.0 |

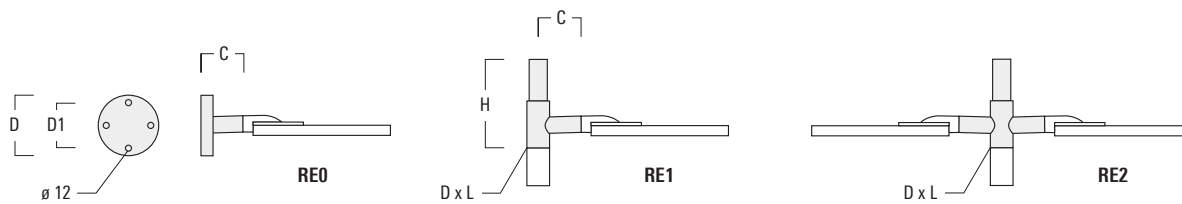
| Pole bracket | | | D x L | C | kg |
|--------------|--------------------|-----------------|------------|-----|-----|
| RV2-76 | for VFL520/530/540 | 108-0980 | ∅ 76 x 100 | 147 | 4.8 |
| RV2-60 | for VFL520/530/540 | 108-0981 | ∅ 60 x 100 | 147 | 4.8 |
| RV5 | for VFL520/530/540 | 108-0982 | --- | 106 | 1.7 |



VFL500-SE SERIES

| Wall bracket | | | D/D1 | C | kg |
|--------------|---------------|-----------------|---------|-----|-----|
| RE0-530 | for VFL530-SE | 111-0052 | 230/195 | 120 | 2.5 |
| RE0-540 | for VFL540-SE | 111-0084 | 230/195 | 140 | 3.4 |

| Pole bracket | | | D x L | H | C | kg |
|--------------|---------------|-----------------|------------|-----|-----|-----|
| RE1-530 | for VFL530-SE | 111-0040 | ∅ 76 x 80 | 400 | 180 | 3.2 |
| RE2-530 | for VFL530-SE | 111-0041 | ∅ 76 x 80 | 400 | 180 | 3.6 |
| RE1-540 | for VFL540-SE | 111-0042 | ∅ 76 x 130 | 550 | 200 | 4.6 |
| RE2-540 | for VFL540-SE | 111-0043 | ∅ 76 x 130 | 550 | 200 | 5.3 |





WE-EF LIGHTING Pty Ltd

6/13 Downard Street

Braeside, Victoria 3195

Australia

Tel +61 3 8587 0444

Fax +61 3 8587 0499

www.we-ef.com

VFL500 LED SERIES

Street and Area Lighting Luminaire

Australia / NZ Edition 2016

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