



AcuityBrands.
Expanding the boundaries of lighting™

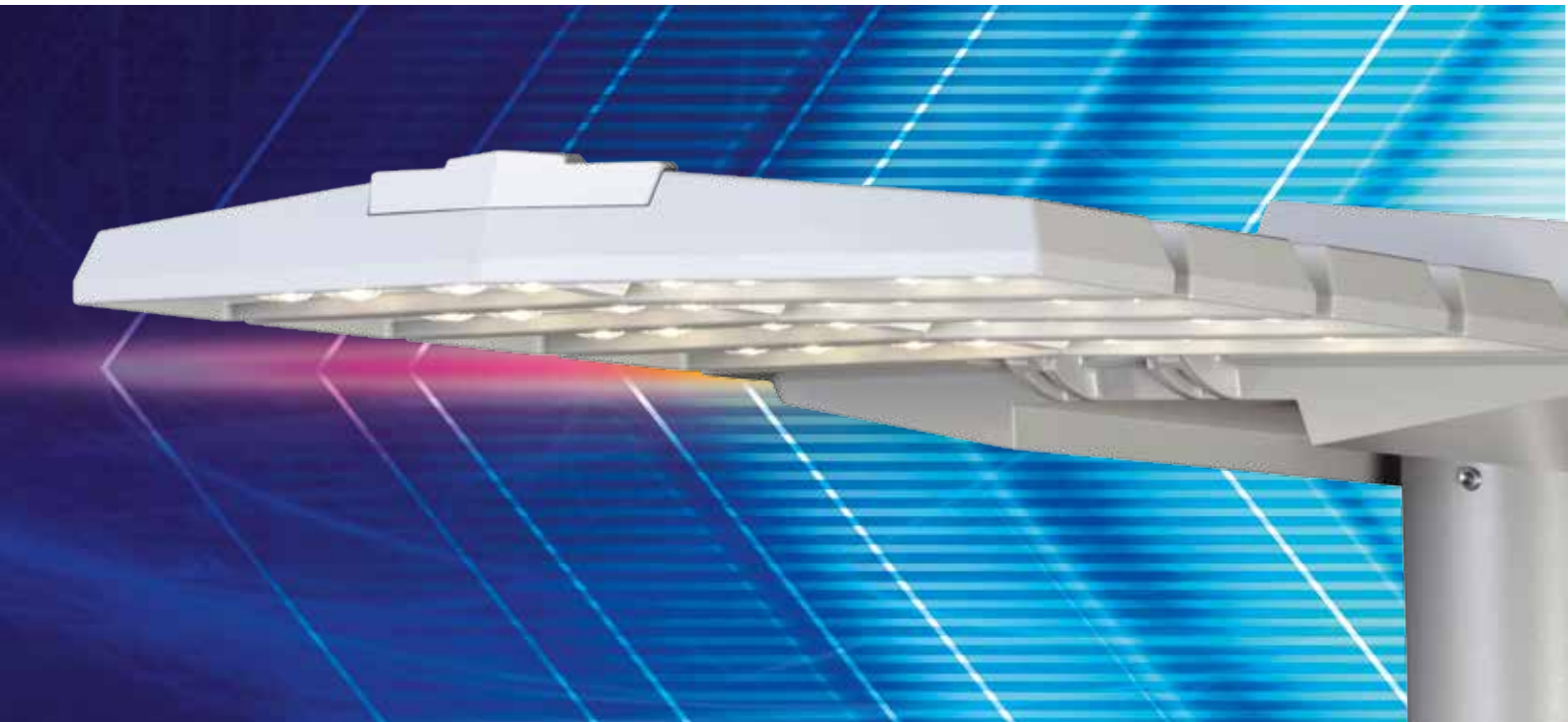
V·MΛX™

ULTIMATE
FLEXIBILITY

HEA
Highway Electrical Association
Award Winner 2014

PATENT PENDING
REGISTERED EUROPEAN DESIGN

V·MAX™



PATENT PENDING
REGISTERED EUROPEAN DESIGN



Ultimate flexibility

V-MAX™ is a landmark LED luminaire characterised by its efficiency and revolutionary form.

With a pioneering modular design the luminaire has been engineered with an approach that subdivides the luminaire system creating a fully scalable, maintainable and upgradeable luminaire that can be used for a range of street lighting applications.

The product design process at Holophane focuses on making the most efficient and modular technology a reality. This aspiration has resulted in developments with a lasting impact. In other words, our work ensures that we are delivering the latest technologies with class leading quality. V-MAX™ is one such development - with its low profile styling, revolutionary modular LED chevron design and customised optics that allow for maximum column spacing, lighting and uniformity.

optics / light source

- > Available with a variety of optical packages for various street lighting standards
- > Lumen packages ranging from 2,000 to 29,000
- > 4000°K and 3000°K colour temperature

approvals

CE

IP 66 light engines (IEC60529)

IP 66 gear compartment (IEC60529)

Ta -40°C to +50°C

For further information please visit the Holophane website
www.holophane.co.uk



Typical Luminaire Performance

Configuration	# of LED Chevrons	Delivered Lumens	Power Consumption	Driver Current	Projected Life of LED Module (L70B50 @Tq 15°C)*
VMX.L034	V1	3000	31W	525mA	100,000+ hrs
VMX.L074	V2	8000	75W	700mA	100,000+ hrs
VMX.L094	V3	9000	81W	525mA	100,000+ hrs
VMX.L184	V5	19000	179W	700mA	100,000+ hrs
VMX.L204	V7	21500	183W	525mA	100,000+ hrs

The above is just an example of the lumen packages offered. For details of all the performance characteristics for V-MAX™ please contact your Holophane representatives

*For other life metric data in line with IEC PA62722-2-1 and 62717 contact your Holophane Representative for details.

Note: Data is correct at time of print.

modular design
optical performance
thermal excellence



V·MAX™

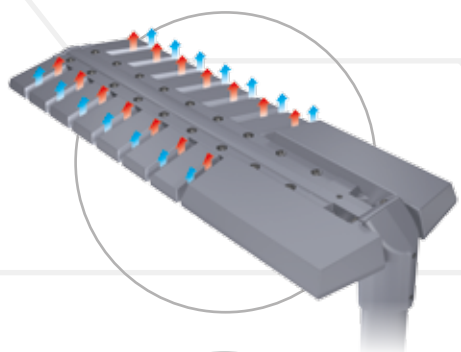
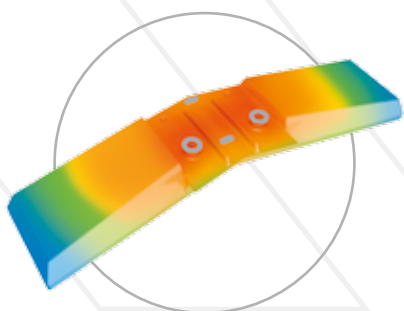


performance

Thermal management

The revolutionary modular design of V-MAX™ has been created to maximise heat dissipation from the critical electronic components and extends the complete life of the luminaire. Heat generated by the LED Chevron causes air to pass between the V-MAX™ air channel. This rising ambient air draws in more cooler and denser air from under the luminaire and draws away the heat created by the LEDs thus using natural convection.

V-MAX™ utilises all three heat transfer principles of conduction, convection and radiation to ensure that the high powered LEDs mounted to the aluminium backed PCB and electronic drivers are thermally managed well within their limit to maximise system life. This provides market leading light output whilst maintaining a high product life.



CONDUCTION

FROM THE LEDS AND DRIVER ONTO THE LED CHEVRON AND RIBBED GEAR HOUSING RESPECTIVELY.



CONVECTION

FROM LED CHEVRON AND THE AIR CHANNEL BETWEEN EACH CHEVRON.



RADIATION

HEAT ENERGY FROM THE DRIVER AND LED CHEVRON IS EMITTED FROM THE CASTING IN ALL DIRECTIONS.

THERMAL EXCELLENCE

specification

The luminaire consists of a die cast LM6 aluminium housing ((EN AC-44100) (AL.Si12)) which is sealed to IP66 with a close cell gasket and M5 stainless steel fastener that also allows access to the gear cover for electrical termination. Metal core LED boards are mounted directly to the die cast LM6 aluminium ((EN AC-44100)(AL.Si12)) chevron to aid heat dissipation. Each IP66 LED chevron is connected to the main housing via gasketed (co-molded to PMMA 825T with TPE Versaflex OM 9-802CL) plug and play connectors and extruded aluminium alloy 6063 (AlMg0.5Si-T6) spine which will vary in length based on the number of LED chevrons. The 2x2 array of PMMA LED lenses are fused to a PMMA 825T overmold to ensure an IP66 seal is maintained. The luminaire is suitable for post mounting (60/76mm) and side entry (34/42/60mm) with the ability to adjust onsite to 0° and 5° tilt.



V-MAX™ Dual cable entry to controls and power - with protective cover (not shown).

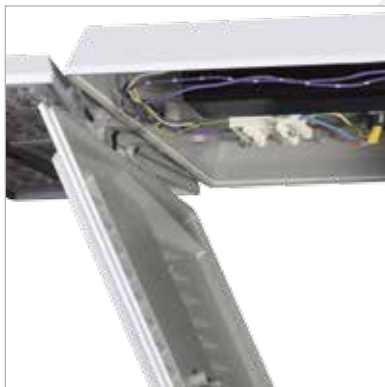
features and benefits

Revolutionary Design

- > Unique ultra slim design which allows 1 to 8 LED chevrons to be assembled to the gear chamber dependent on the required lighting performance thus ensuring visual and performance consistency for a variety of street lighting schemes.
- > Plug and play LED chevrons that can be upgraded easily in situ, as LED efficiency improves.
- > Suitable for post top or side entry mounting without the requirement for an additional bracket.

Enhanced Thermal Management

- > Designed to ensure that the LED chevrons are mounted to the aluminium spine with an air channel between each chevron to allow convection.
- > Each LED chevron has been designed to act as its own independent heatsink - thus conducting and radiating heat away from the critical LED components.



V-MAX™ Hinged gear housing access.

High Efficiency LED Technology

- > High quality, highly efficient, LEDs used in conjunction with the latest LED drivers ensures that superior lumen per watts and a long system life are achieved.

Fully Controllable Luminaire

- > Developed to offer standalone flexibility for constant lumen output, variable lighting levels and part time regimes.
- > Available with DALI controls option.



V-MAX™ LED Chevron.

modularity

scaleable
maintainable
upgradeable



MODULAR



The V-MAX™ has a modular design that has been developed with an approach that subdivides the luminaire system into individual modules (LED Chevrons) that are fully scalable, maintainable and upgradeable.

Scaleable

V-MAX™ is a fully scaleable luminaire that has been developed around one gear capsule that has the capability to be used with 1 to 8 LED chevrons. This creates a luminaire that ensures visual and performance consistency with a lumen package from 2,000 to 29,000 thus enabling it to be used for all types of residential roads, pedestrian areas, main roads and trunk roads.

Maintainable

Maintainability is the ease with which a product can be maintained in order to isolate defects, correct defects and replace faulty components without having to replace components that are not affected. V-MAX™ has been designed to deliver all of these benefits to the end user - throughout the lifecycle of the product. With its 'plug and play' LED chevrons which can be replaced in-situ V-MAX™ is the complete maintainable LED streetlighting solution.



DESIGN

modularity

Upgradeable

The modularity of V-MAX™ makes this LED luminaire future proof. The LED Chevrons can be upgraded easily in situ - not only making the luminaire fully maintainable but completely upgradeable - as LED efficiency improves so can your luminaire.



Step 1

Undo the LED chevron from the luminaire spine



Step 2

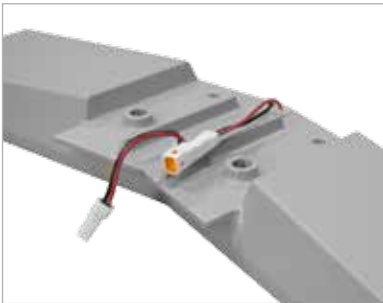
Disconnect the old LED chevron using the 'plug & play' connectors



Step 3

Remove the old LED chevron





Step 4
Detached LED chevron



Step 5
Plug in new LED chevron using existing
'plug and play' connectors on the
luminaire spine



Step 6
Mount new LED chevron to the
luminaire spine



optical performance



OPTICAL PERFORMANCE

V·MAX™

The unique design of the V-MAX™ LED chevrons utilises efficient LEDs with a 2x2 optical system which works seamlessly to deliver the desired street lighting performance for all types of environments from pedestrian areas to trunk roads.

This high performance 2x2 optical system can be optimised for all lighting classes and geometries. This lens system delivers many distributions and is recessed within the LED chevron which aids in the prevention of light pollution.



optical performance

typical spacings

pedestrian area P4

- > Luminaire on a 6m column with 0.5m outreach.
- > Column mounted 2m from the edge of the road.
- > Total road width of 10m.
- > Footpath of 2m each side.

residential road P2

- > Luminaire on a 8m column with 0.5m outreach.
- > Column mounted 3.5m from the edge of the road.
- > Total road width of 12m.
- > Footpath of 3.5m each side.

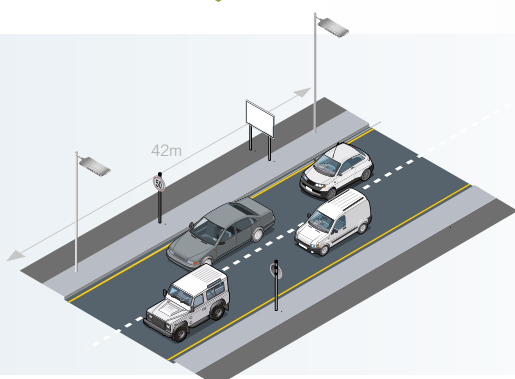
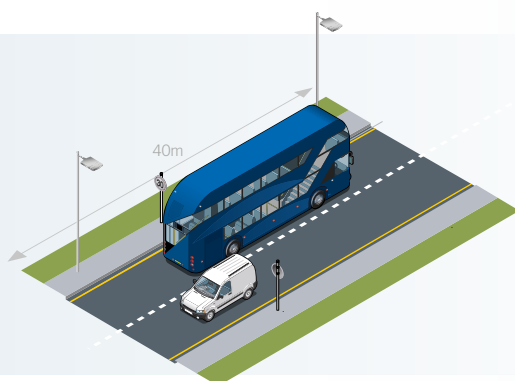
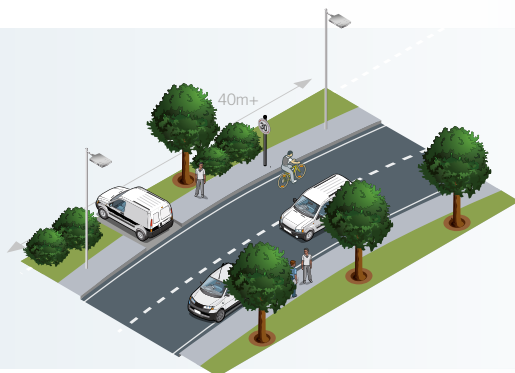
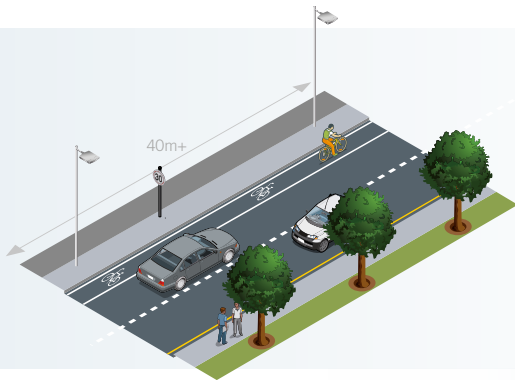
main roads M4

- > Luminaire on a 8m column with 0.5m outreach.
- > Column mounted 1.50m from the edge of the road.
- > Road width of 7.5m (two lanes 3.75m each).

trunk roads M2

- > Luminaire on a 12m column with 0.5m outreach
- > Column mounted 1.5m from the edge of the road.
- > Road width of 7.5m (two lanes 3.75m each).







V-MAX™ 0° tilt



V-MAX™ 5° tilt

applications

BS 5489:2012
BSEN13201

Residential lighting
Pedestrian areas
Main roads
Trunk roads
Dual carriageways
Car parks

weight (with control gear)

VMX V1 version	6kg
VMX V2 version	8kg
VMX V3 version	9kg
VMX V5 version	12kg
VMX V7 version	15kg

TA

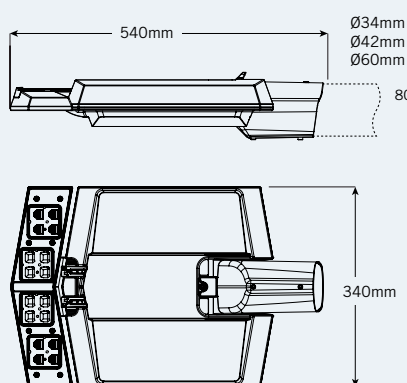
-40°C to 50°C

windage (effective projected area)

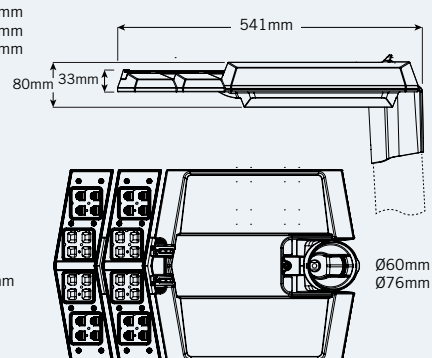
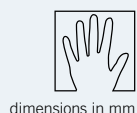
VMX V1 version	0.034m ²
VMX V2 version	0.037m ²
VMX V3 version	0.039m ²
VMX V5 version	0.044m ²
VMX V7 version	0.049m ²



Side Mounting V1 version

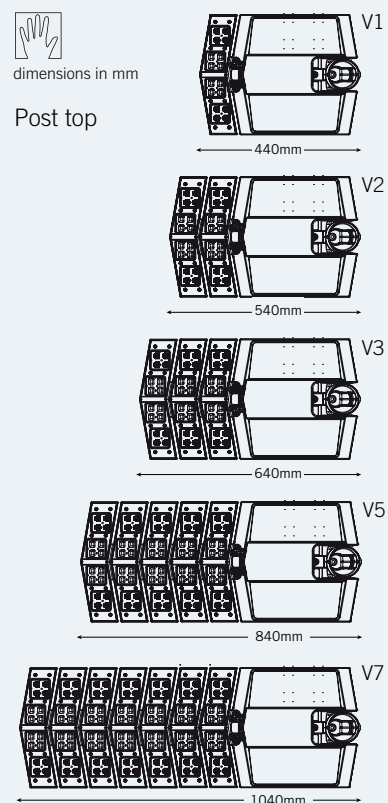


Post Mounting V2 version



dimensions in mm

Post top



Note: The specifications of the Holophane luminaire represents typical values. All descriptions, illustrations, drawings and specifications in the Holophane catalogue and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.



ordering details - luminaire

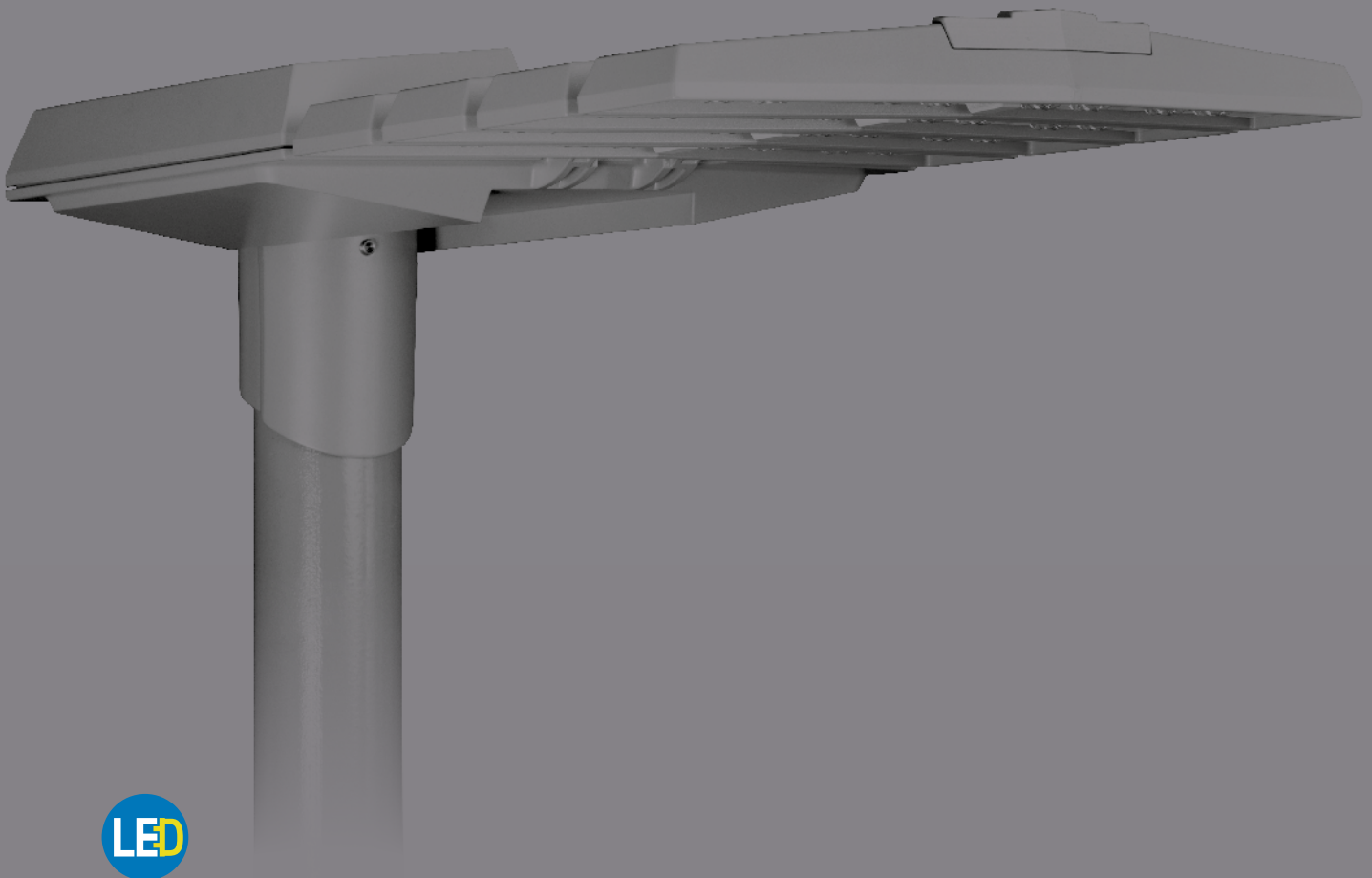
Code	
VMX	V-Max Luminaire
Code	Lamp Type (required)
.L034	LED light engine producing c.3000 lm with a nominal 4000K colour temperature
.L074	LED light engine producing c.7000 lm with a nominal 4000K colour temperature
.L094	LED light engine producing c.9000 lm with a nominal 4000K colour temperature
.L184	LED light engine producing c.18000 lm with a nominal 4000K colour temperature
.L204	LED light engine producing c.20000 lm with a nominal 4000K colour temperature
Code	Operating package
.V1	1 LED chevron
.V2	2 LED chevrons
.V3	3 LED chevrons
.V5	5 LED chevrons
.V7	7 LED chevrons
Code	Optic
.X2L2	X2L2 optical setting
.L2L3	L2L3 optical setting
.X2L3	X2L3 optical setting
.L2L4	L2L4 optical setting
Code	Fixing method
.PT	Post top 60mm - 76mm diameter
.SE2	60/76mm side entry mounting
.SE1	34/42mm side entry mounting
Code	Colour
.C9	Metallic silver (RAL 9006)
.RAL****	RAL colour (customer choice)
Code	Electrical Class
.CII	Class II
Code	Photocell (Not available in Class II)
.T1	Complete with NEMA socket (to accept standard NEMA photocell)
.TSZ	Complete with miniature 70 lux factory fitted photocell (Zodion SS12)
.TSZA	Complete with miniature 55 lux factory fitted photocell (Zodion SS12)
.TSZB	Complete with miniature 35 lux factory fitted photocell (Zodion SS12)
Code	Paint finish
.C	Enhanced paint finish
Code	Dimming Outputs
.LRD	DALI electronic control gear
.LRT56	Pre-set to dim to 50% between 12am to 6am
.LRT66	Pre-set to dim to 60% between 12am to 6am
.LRT76	Pre-set to dim to 70% between 12am to 6am
Code	Control Gear
	Over the life of the luminaire...
.CL7	Programmed to deliver 70%
.CL8	Programmed to deliver 80%
.CL9	Programmed to deliver 90%



Note: L034 available with V1, L074 available with V2, L094 available with V3, L184 available with V5 & L204 available with V7.

The above is just an example of the lumen packages available. To see the complete range of V-MAX™ please contact your Holophane representatives.

To find out more please visit www.holophane.co.uk



V·M^X™

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