valo paa

TEHTY SUOMESSA
MADE IN FINLAND

PRODUCT
CATALOGUE
2016

Valopaa Ltd. – intelligence to illumination

All Valopaa products are designed and manufactured in Finland, and have been granted the Finnish Key Flag origin mark.

Strong R&D know-how

The R&D team of Valopaa has a world class know-how in lighting and optics planning, electronic and software design, mechanical and thermal planning and industrial design.

The Valopaa products are developed on Valopaa's own modular product platform. Our design philosophy arises from good lighting, high energy efficiency, maintainability, reliability of the products, suitability to demanding environments and efficient industrial manufacturing.

Production and cooperation network

The Valopaa production has been audited by SGS Fimko, according to official luminaire production requirements. All manufactured products are tested in-house before packaging to ensure the high quality of the delivered products. All of Valopaa's production partners are ISO9001 certified.

Luminaires and all components used in them can be traced subsequently.

International research cooperation

Valopaa cooperates with VTT Technical Research Centre of Finland, Aalto University (incl. the Lighting Lab) and University of Oulu.

Cost efficiency over life cycle

The Valopaa products have been developed to achieve the most economic cost for the entire product life cycle.

The cost efficiency of Valopaa products arises from low energy usage, virtually nonexistent maintenance costs, long lifetime and easy maintainability that stems from the modular product structure.

Certified LED luminaires

Valopaa endows all products with a CE marking, indicating that the products fulfill all required standards. Our management system is ISO9001 and ISO14001 certified. In addition, all of the drivers have been certified.
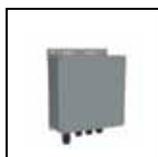
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High quality, reliable and long-lasting LED luminaires

INTELLIGENT LIGHTING

Valopaa has developed the iLUMNET intelligent lighting control system. Lighting can be managed to create a safe environment where illumination is exactly as needed at that moment. The system enables easy expansion and changes to the luminaire control.

The iLUMNET system grows with the cystomer's needs from intelligent luminaires, to groups of luminaires and control devices, all the way to a remotely controlled entity.

Intelligent control typically halves energy consuption compared to non-controlled illumination with the same lighting technology. Wireless control doesn't require control cables, control devices that are installed to the electricity grid, or physical installation change work.

LED COMPONENTS

Valopaa uses Lumileds Luxeon LEDs. These LED components have high energy efficiency, low scale and well-known lumen depreciation, very low percentage of failure, good selection of features, feature stability, and comprehensive documentation based on extensive testing.
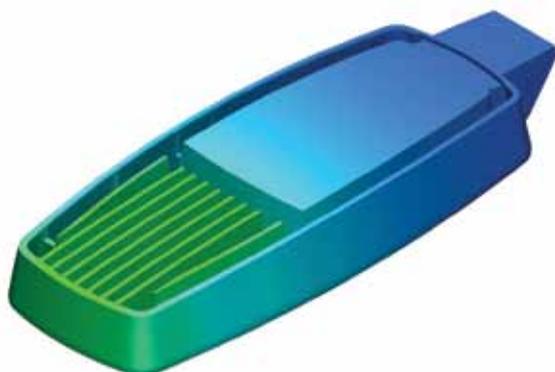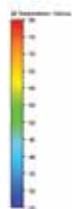
We design and manufacture the LED circuit boards ourselves. Therefore, we can always guarantee competitive LED luminaires.

LED DRIVERS

Valopaa uses certified LED drivers that have operating temperature from -40 °C. Lifetime and reliability data is available for the drivers. The luminaires are designed to keep the temperature at low levels to ensure the specified long lifetime.

THERMAL MANAGEMENT

Heat control is an essential factor in reliability of a luminaire. Failure rate of LEDs, drivers and all electronics typically doubles when the temperature of the luminaires increases by 10 °C.

Produced heat is transferred to the ambient air through the aluminum structures of the Valopaa luminaires. The luminaires are designed in a way to ensure their temperature staying low enough throughout their lifetime. Part of the Valopaa luminaires are designed to an operating temperature as high as 55 °C.

The mechanical parts of the luminaire are made of aluminum or stainless steel, that are strong enough and durable against time and hard environments.

MAINTAINABILITY

All Valopaa products are based on the same modules, which are changeable on-site or at depots depending on the product and the mechanic. The number of spare parts is low because of the modularity.

Essential features are traceable with the serial number of the LED module, and the compatibility of the spare part can be ensured.

Valopaa optics

In the Valopaa LED luminaires every LED module has its own optical lens that produces the light distribution. The Eulumdat files can be downloaded from www.valopaa.com.
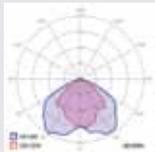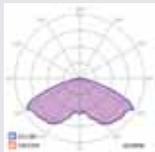
OPTICS FOR GENERAL LIGHTING

Lens V8
- suitable for industrial halls, parking areas and underpasses
- glare minimized

Lens V9
- developed for general lighting

Lens V9B
- developed for ceiling lighting, low canopies
- suits indoors and outdoors
- designed to minimise glare

Lens V9D
- a very wide round light beam
- suited for garden and park lighting
- suits well several retrofit installations

Lens V15
- floodlights in area lighting
- asymmetric light distribution

Lens V16
- suited for area lighting, especially for sport grounds and arenas
- square-shaped light distribution

OPTICS FOR STREET LIGHTING

Lens V11
- for narrow streets (pedestrian streets and roads at residential areas)
- for accent lighting
- minimizing light pollution
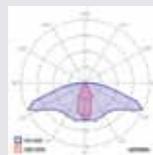
Lens V12
- for typical residential streets
- asymmetric light distribution for even light
- well suited for parking areas

Lens V14
- for street lighting
- asymmetric light distribution for even light

OPTICS FOR SPOTLIGHTING
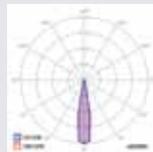
Lens V7
-spotlighting and accent lighting
-opening angle (FWHM) 20°
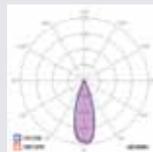
Lens V10
-accent and spotlighting
- opening angle (FWHM) 35°

OPTICS FOR BILLBOARDS

Lens V13
- for signs and billboards

Ledil LENSES

Compatible Ledil lenses can be used with designated VP luminaires.

Ledil DWC   Ledil ME   Ledil T4   Ledil VSM

FWHM: Full Width at Half Maximum

Instead of the Valopaa optics, other commercially available optics can be used in some of the VP LED luminaires, if mechanically compatible.

iLUMNET - INTELLIGENT LIGHTING

iLUMNET is a wireless and flexible solution to public and industrial lighting. Intelligent control of the illumination further increases the energy efficiency of LED lighting while providing more purposeful lighting and a pleasant environment for citizens.

INTELLIGENT LIGHTING SYSTEM

The intelligent Valopaa luminaires and iMASTER communicate wirelessly over a radio network. One iMASTER can manage multiple groups and over 500 luminaires. In addition to managing street lighting, the iMASTER can manage simultaneously lighting of e.g. pedestrian ways, parks and playgrounds at a radious of 10 km. Area lighting control can also include sensors and switches, e.g. at sport venues.

The iLUMNET system can be used with all iLUMNET capable luminaires, also from other luminaire manufacturers.

PLEASANT LIVING ENVIRONMENT

Optimal and purposeful lighting creates a pleasant living environment for citizens.
Contributes to sustainable development and decreases the stress on the environment.

ENERGY EFFICIENT

Optimal lighting management brings energy savings that enable fast payback.
Optimization with the iLUMNET system brings approximately 50% energy savings compared to a fixed LED lighting system.

SMART CITY

The iLUMNET system can work as a smart city platform. The system can collect data that can be used in many applications.
On the other hand, the iLUMNET system can use data from other systems.

WIRELESS IoT TECHNOLOGY

Efficient and flexible lighting system management.
Deployment and changes remotely via a web interface.
Luminaires always online. Customized reporting.

FUTURE PROOF

Easily expand and upgrade your system.
Add luminaires and control devices when needed, and expand your iLumNet system as it grows.
Update your system and devices wirelessly. Future features can be wirelessly updated to your devices.

Area lighting

Street lighting

Building lighting

iLUMNET

Subject to change without prior notice.

iLUMNET Makes lighting intelligent

INTELLIGENT LUMINAIRE
- The intelligent luminaire can be programmed to desired level at factory, and if needed, adjust the level during installation.
- Possible to later add the existing luminaires as part of intelligent lighting system.

LOCAL CONTROL
- Intelligent luminaires and sensors control the lighting locally (grouping, low level, high level, duration of high level can be defined).
- Also other sensors and devices can be used.
- Application examples: Halls, canopies, yards, sport facilities.
- Possible to later add as part of the cloud managed system.

CLOUD SERVICE BASED CENTRAL MANAGEMENT
- Central management in cloud based service.
- Local control according to profiles and grouping with iMASTER.
- Reporting and fault notification
- More features
- External interfaces
- RGBW lighing

INTELLIGENT CONTROL WITH AN IoT-CAPABLE SYSTEM
The iLUMNET lighting system is a fully IoT-capable system where luminaires can be controlled intelligently and individually.

Luminaires can be defined into single or several areas. The system offers energy efficiency with area-specific lighting profiles which can reduce costs compared to lighting without intelligent control.

The iLUMNET system makes it possible to save significantly in energy consumption as lighting level can be adjusted exactly to the need.

CENTRAL CONTROL
LUMOSCOPE, the cloud-based central control provides easy control and monitoring of area lighting systems, and no separate control room installation is required. You can access the LUMOSCOPE central control through any device with a web browser, be it a desktop PC, a laptop, a tablet or a mobile device.

Area definitions, profile definitions and all changes to the control of the lighting system are performed with LUMOSCOPE central control. System status and alarm indications are also provided along with various reports.

With the future-proof cloud-based system, there is no limit to the amount of luminaires the system can control – it scales to your needs, and software updates provide new functionalities.

EXTERNAL CONTROL INTERFACES
As central control is provided as a cloud service, external controls can be integrated to the iLUMNET system. Such external controls can be based on traffic volumes, energy prices, weather or any other system.

The iLUMNET Intelligent LED Lighting System is a modular wireless platform for safe, appropriate and adaptable lighting solutions. The system is scalable according to the customer's requirements with an array of available intelligent devices for a comprehensive wirelessly controlled lighting infrastructure. Each intelligent device and other devices connected to it act as an individual node in the intelligent wireless system.

Mobile application

LUMOSCOPE

Cloud server

(A)

(B)   (C)   (D)   (E)   (F)   (G)   (H)

(A) **The iMASTER** manages the area containing devices and groups. It communicates with all the devices in the area with SRD radio and is connected to the iLUMNET server with a secure internet connection.

(B) **VP intelligent luminaires** are intelligent devices used in a flexible manner in the lighting system without any additional installed infrastructure.

(C) **VP intelligent luminaires with sensors** provide added detection functionality to control devices in the area based on presence or ambient luminance.

(D) **The iSENSE** is a wireless multisensor to detect movement, ambient luminance and temperature.

(E) **The iCONTROL** is used for dimming groups of commercial luminaires with a wired DALI or 1-10V interface. A group of connected luminaires act as one device in the intelligent lighting system.

(F) **The iCONTROL** is used for switching on/off groups of commercial luminaires by controlling the external relay at the power supply. This is also used together with 1-10V dimming.

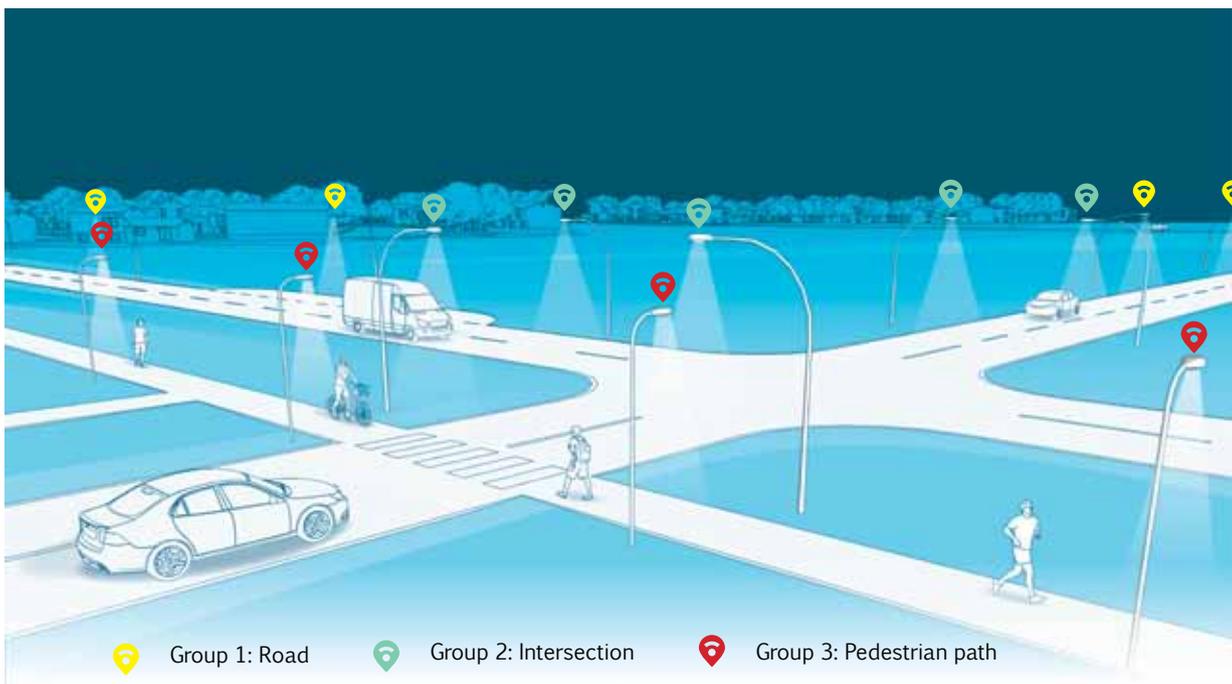(G) **The iCONTROL** is connected to sensors for added functionality to control devices in the area based on the detection information from the installed commercial sensor unit.

(H) **The iSWITCH** is used in intelligent systems when manual control of lighting is needed, giving the user the means to turn on lights for a preset length of time.

Subject to change without prior notice.

iLUMNET Makes lighting intelligent

APPLICATION EXAMPLES

Group 1: Road   Group 2: Intersection   Group 3: Pedestrian path

Luminaires can be grouped for example to different areas of the street environment. The intersection can be defined as one group, and it can have higher lighting levels compared to others parts of the street.

Different control devices and sensors can be added to the system to provide control data. For example, at the main road, a radar can be used in addition to timed lighting profiles. At the pedestrian path, sensors can be used to create illumination that adjusts as needed.
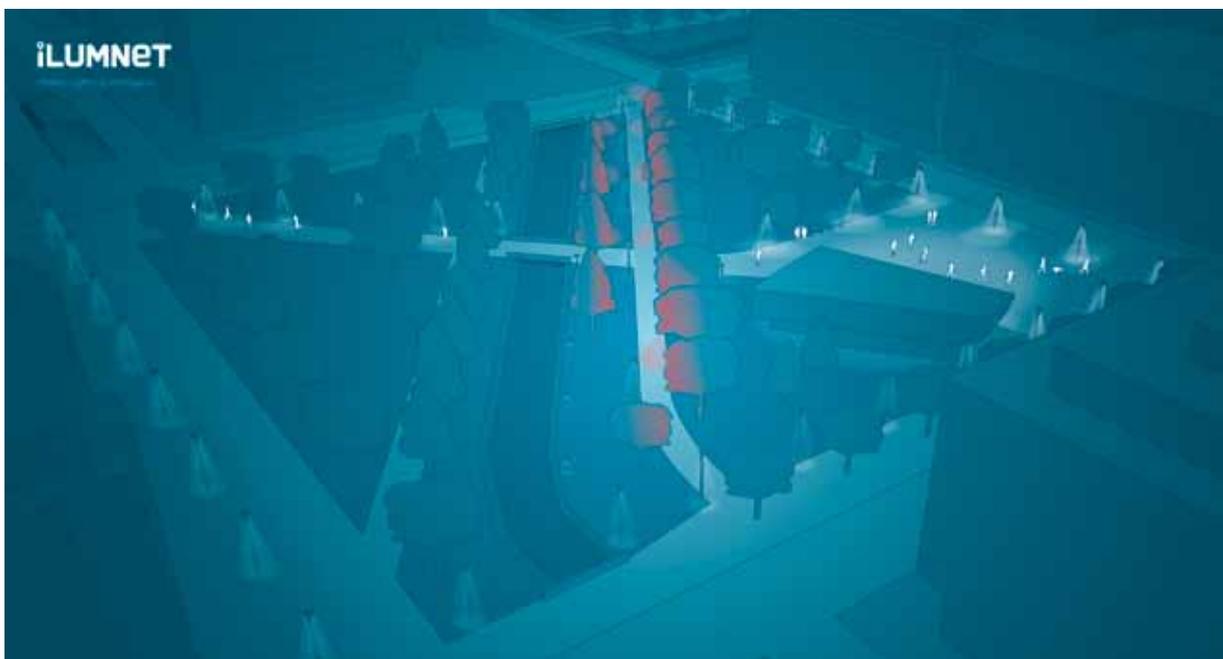
Free grouping can be used in parks to liven up the area and save energy. The lighting can be at a higher level and operate with a motion detector where people are present.

RGBW lighting creates atmosphere to parks and in architectural lighting. Colored lighting operating profiles can be created with the iLUMNET system with a large scale of colors and tones.

iMASTER

iMASTER is the central communication and controlling hub in iLUMNET intelligent LED lighting system. It contains an industrial Linux-computer with lighting control software.

iMASTER uses wireless communication to control and manage all smart nodes allocated to the local area. It communicates with iLUMNET server that manages intelligent lighting system configurations and modifications. iMASTER also enables remote server based features like reporting, fault notification and SW upgrades.

KEY FEATURES

Radio communication with smart luminaires and sensors
- Control based on the clock, calendar or sensory data (sensors are optional)
- Parameter and software updates

3G, WLAN and Ethernet connection to the VP Server
- Local area lighting system configuration and related parameters
- Updates to internal software
- Sending operational data for monitoring and reports

A secure internet connection
- Advanced encryption
- Advanced authentication

Industrial Linux-computer
- Calendar
- Clock
- Guaranteed battery life that goes beyond the expected lifespan

Subject to change without prior notice.

iCONTROL

iCONTROL is a multipurpose device to enable use of compatible luminaires, luminaire groups and sensors in iLUMNET intelligent lighting system. Connected devices communicate wirelessly with other iLUMNET smart devices and iMASTER unit in the location.

One iCONTROL can control group of multiple luminaires being very efficient solution especially when upgrading existing installations. iCONTROL supports 1-10V and DALI control interfaces. Device can drive external relay typically used to switch off power with 1-10V controlled luminaires or to control relays in control cabinet to switch lights on/off.

iCONTROL can utilize output from common commercial sensors, like twilight and motion detectors. Device reads the sensor output and controls the smart lighting system behavior as defined in the iLUMNET server.

KEY FEATURES
- SRD radio communication within iLUMNET system
- 1-10V and DALI control interface
- Control of external relay
- Use of commercial sensors or switches

iCONTROL 401
- Energy consumption measurement and reporting

iSWITCH

iSWITCH gives the user means to turn on lights for preset duration of time. iSWITCH can control wirelessly all intelligent luminaires or luminaire groups in the local area. Individual luminaires' or group´s response to the iSWITCH control can be programmed as wanted.

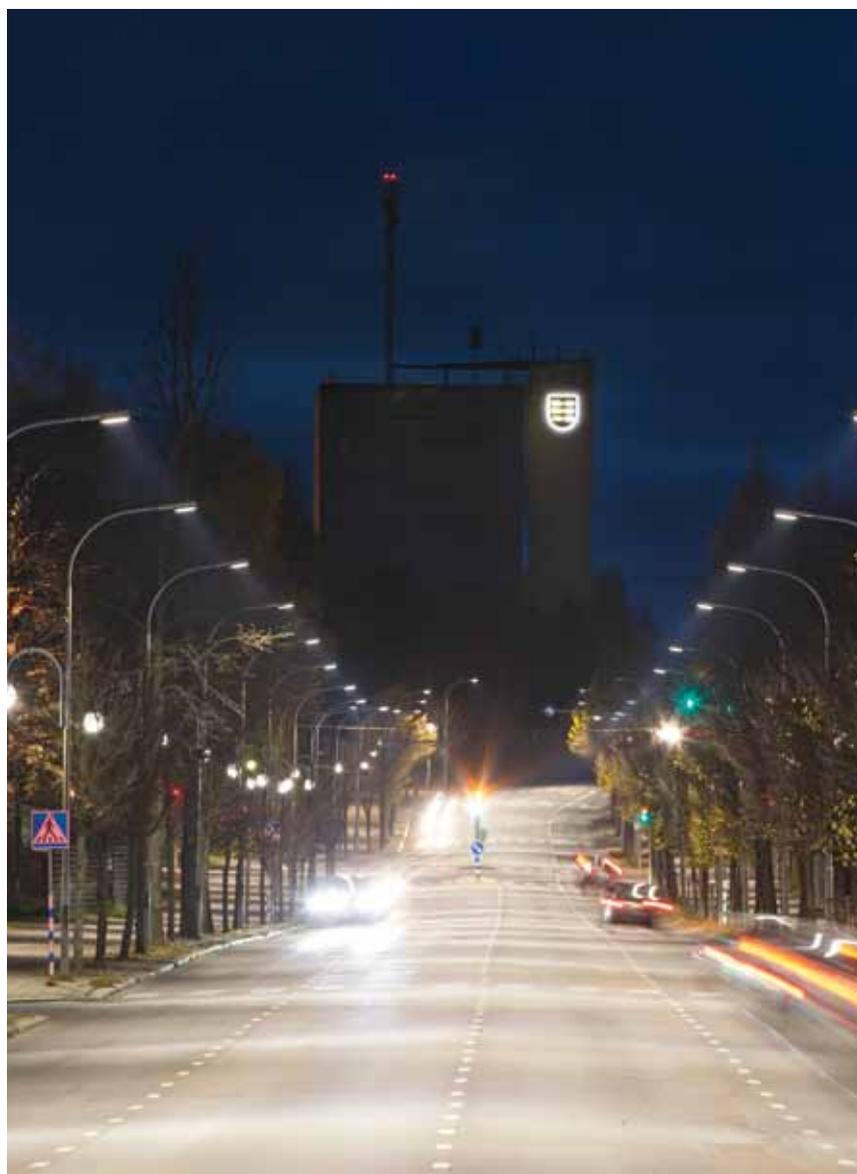iSWITCH is typically used with area lighting (like parks, sports venues) and indoor installations where manual control of lighting is needed.

KEY FEATURES
- Push button switch to turn on lights for a period of time.
- SRD radio communication within the iLUMNET system.
- Controls smart luminaires without the iMASTER.
- Possibility to add a commercial sensor.

LED LUMINAIRES

valopaa. LUMINATION

VP1001 LED Street Luminaire

Standard:

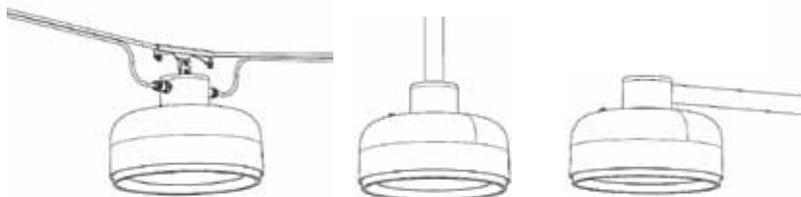| IP65 | RAL9010 | 3 x 2,5 mm² | –O | DWC | i | ⚡ | ⏚ |

Options:

| DALI | 1-10V | PROG | LEDiL |

Use for: Urban street and area lighting. The nice round shape and the wide colour options enable the luminaire to be used in various surroundings.

Installation: Poles, horizontal arm or by horizontal wire hanging.

VP1001 is a long lasting, energy efficient and modern street luminaire in which functionality and intelligence create a beautiful and harmonic entity.

VP1001	40i	70i	100i	40	70	100
Input Power W	0, 9 - 39	0, 16 - 70	0, 20 - 100	39	70	100
Useful quantity of light lm	0, 700 - 3880	0, 1400 - 7760	0, 1200 - 9200	3880	7760	9200
Operating temperature °C	-40…+50					
Weight kg	8.3	8.3	9.2	8.3	8.3	9.2
Materials	Anodized / painted (stoved) aluminum and stainless steel.					
Fastening	Ø 60 mm pole, horizontal arm or wire hanging					
Effective projected area	0,134 m²					
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.			Typically less than 10%/100 000 h		
Life span $L_{80}B_{10} C_{10} T_a 25$	> 100 000 h			100 000 h		
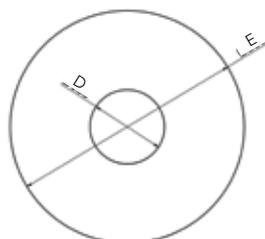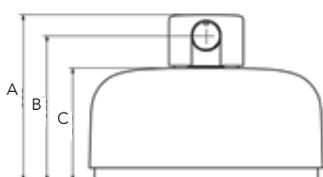
	A	B	C	D	E
	360	315	245	Ø 160	Ø 500

Measurements in millimetres

valopaa.

VP1011 LED Street Luminaire

Standard: | IP66 | RAL 7036 | 3 x 2,5 mm² | –O | LEDiL | *i* | ⚡ | ⏚ | ✦16

Options: | DALI | 1-10V | PROG

Use for: Street, road and training route lighting. New installations and replacing 125W and 250W mercury vapour luminaires.

Installation: Pole or shaft.

The cost efficiency of the street luminaire arises from high quality materials, high luminous efficiency and virtually non-existent maintenance costs.

VP1011	20i	35i	70i	100i	120i	155i
Input power W	0, 5-25	0, 5-40	0, 10-70	0, 15-100	0, 20 - 120	0, 20-155
Useful quantity of light lm	0, 400-2000	0, 400-3500	0, 800-6500	0, 1200-9200	0, 2500-12880	0, 2500-15880
Operating temperature °C	-40…+55					
Weight kg	~6.5					
Materials	Painted (stoved) aluminium casting and arm bracket, UV protected polycarbonate.					
Effective projected area	0,06 m²					
Fastening	Ø 60 mm pole Ø 42-60 mm shaft					
Tilt angle	0°, ± 5°, ± 10°, ± 15°					
Coupling	10 m MMJ cord or short MPK cable with connectors					
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.					
Life span $L_{80}B_{10}$ C_{10} T_a 25	> 100 000 h					

VP1011	20	35	70	100	120	155
Input power W	20	35	70	100	120	155
Useful quantity of light lm	2000	3300	6500	9200	12500	15880
LED lumen maintenance	Typically less than 10%/100 000 h					
Life span $L_{80}B_{10}$ C_{10} T_a 25	100 000 h					

VP1011	25i HP	40i HP	70i HP	100i HP	25 HP	40 HP	70 HP	100 HP
Input power W	0, 65- 25	0, 6 - 40	0, 15 - 70	0, 15 - 100	25	40	70	100
Useful quantity of light lm	0, 340 - 2750	0, 500 - 4720	0, 1200 - 8210	0, 1200 - 11420	2 750	4 720	8 210	11 420
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.				Typically less than 10%/100 000 h			
Life span $L_{90}B_{10}$ C_{10} T_a 25	100 000 h							
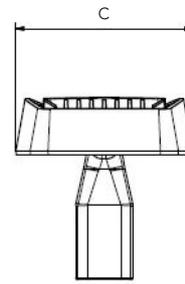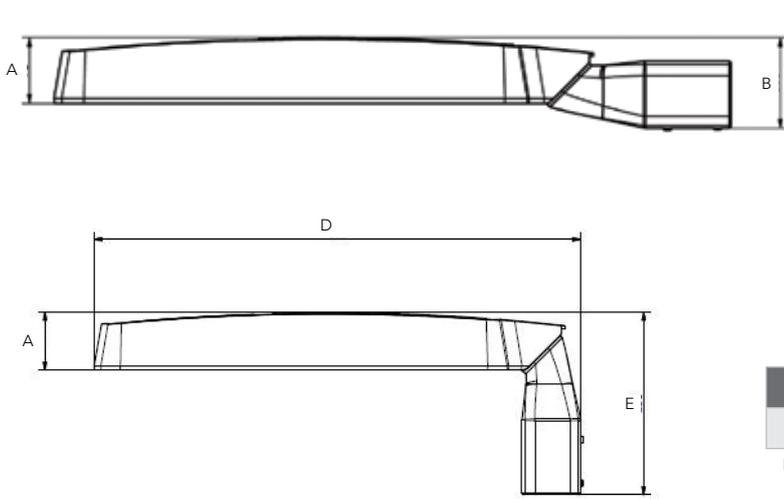
	A	B	C	D	E
	73	100	222	612	231

Measurements in millimetres

Downtown Pieksämäki in Eastern Finland has intelligent VP1011 luminaires.
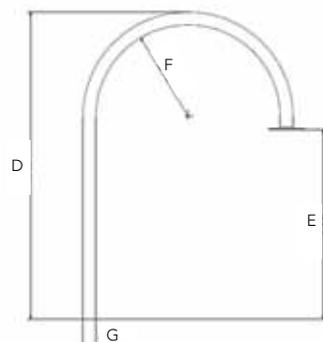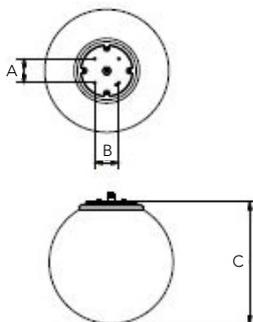
VP1101 LED Street Luminaire

Standard:

| IP43 | RAL9006 | 3 x 2,5 mm² | -O | *i* | ⚡ | ⏚ |

Options:

| DALI | 1-10V | PROG |

Use for: Streets, parks, bridges and yards.

Installation: Mounted pointing downwards onto a Ø 60 mm arm.

VP1101 is designed as a traditional sphere luminaire, but it is equipped with the latest LED technology.

VP1101	M4 i	M4
Input power W	0, 9 - 69	39
Useful quantity of light lm	0, 900 - 6500	3600
Operating temperature °C	-40…+55	
Measurements Ø	Available in 400 mm or 500 mm diameter sphere	
Weight kg	4.5 kg (Ø 400), 4.7 kg (Ø 500)	
Effective projected area	0,14 m² (Ø 400), 0,22 m² (Ø 500)	
Materials	Grey painted aluminum, anodised aluminum, cast aluminum column bracket. Opal diffuser, prismatic or clear impact-resistant polycarbonate.	
Fastening	Ø 60 mm horizontal arm	
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.	Typically less than 10%/100 000 h
Life span $L_{80}B_{10} C_{10} T_a 25$	> 100 000 h	100 000 h

	A	B	C
Ø 400	78	78	396
Ø 500	78	78	501

	D	E	F	G
arched arm	1157	715	343	Ø 48

Measurements in millimetres

Subject to change without prior notice.

valopaa. LUMINATION
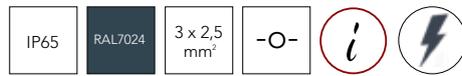
The Kuokkala bridge in Jyväskylä, Finland, has been illuminated with traditional sphere shaped luminaires that were modernized to the LED era with the VP1101 LED street luminaires.

valoT (VP8110) LED Bollard

Standard: | IP65 | RAL7024 | 3 x 2,5 mm² | -O- | *i* | ⚡

Options: | ▦ | RGBW | DALI | 1-10V | 700 mA

Use for: Passageways, highlighting trees, facade lighting and spotlighting.

Installation: Concrete base. Available also for pole installation. The luminaire can be installed to metal and wooden poles.

The design tolerates vandalism very well. The bollard can be equipped with intelligent motion sensors and controlled with the Valopaa intelligent lighting control system. The two-sides (down and up) of version VP8111i can be controlled individually.

valoT concept design and shape created by Henrika Pihlajaniemi from Arkkitehdit m3 Oy.

	VP8111i (down + up)	VP8112i (down)	VP8113i (up)	VP8114i (forward)	VP8121i (2-sided down)	VP8122i (1-sided down)
Input power W	0, 4 - 40	0, 3 - 25	0, 2 - 17	0, 3 - 25	0, 7 - 70	0, 4 - 40
Useful quantity of light lm	0, 440 - 4000	0, 350 - 2500	0, 200 - 1700	0, 350 - 2500	0, 770 - 7000	0, 440 - 4000
Operating temperature °C	-40...+40					
Bollard measurement l x w	180 x 180 mm					
Bollard height mm	1200				5000	
Measurements l x w x h mm	470 x 180 x 180	320 x 180 x 180	320 x 180 x 180	320 x 180 x 180	470 x 180 x 180	320 x 180 x 180
Materials	Bollard and luminaire; zinked steel, painted. Light source: aluminium					
Fastening	Concrete base. Pole mounting with adjustment bolts					
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.					
Life span $L_{80}B_{10} C_{10} T_a 25$	> 100 000 h					

The ValoT bollards are also available with RGBW functionality. The colorful illumination is controlled with the iLUMNET system to create a lighting profile for changing the colors. In addition to the vast array of colors, the RGBW luminaires can also create white light.
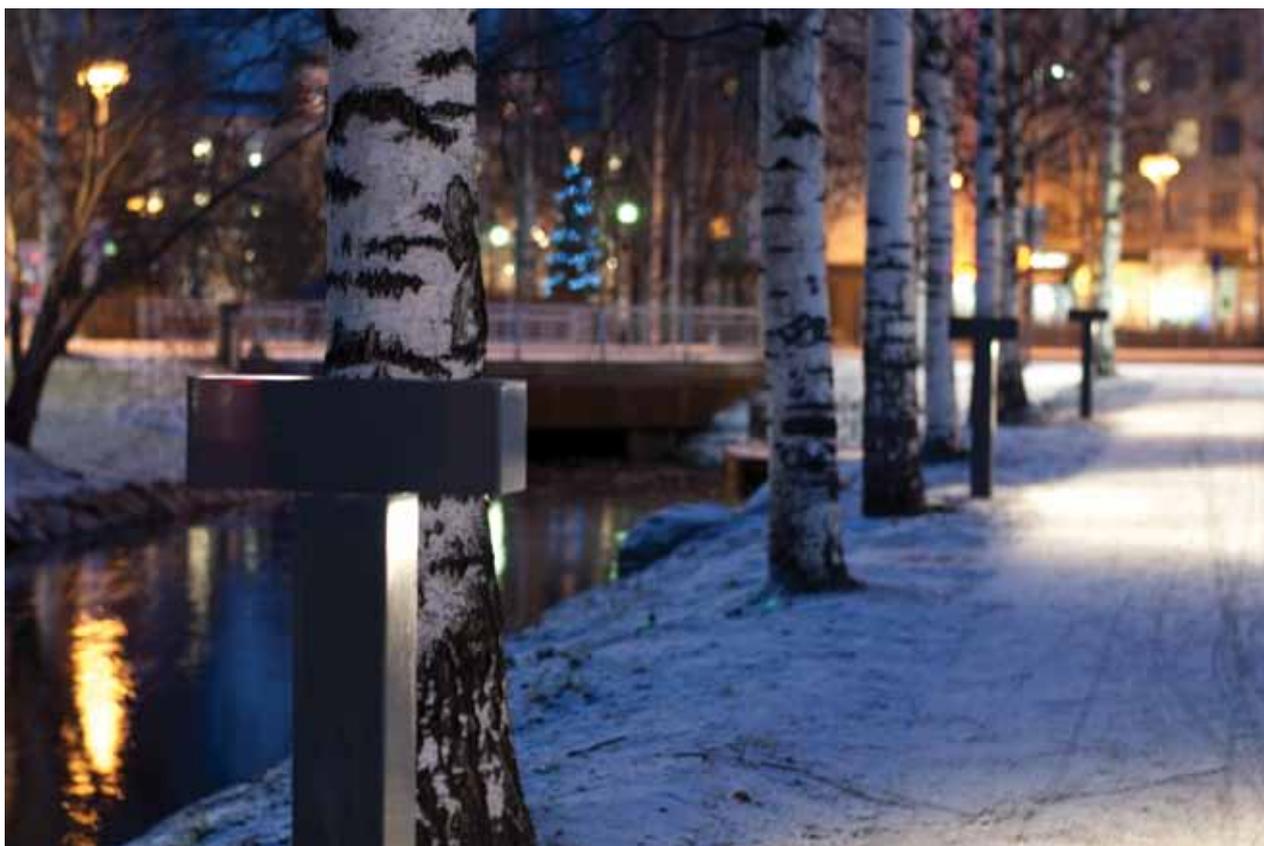
The Otto Karhi park in downtown Oulu, Finland, has been illuminaed with valoT bollards. A two-sided luminaire illuminates both the walking path and the near by trees. The upward part of the luminaire functions as a RGBW luminaire.

VP2101 & VP2102 LED Canopy Luminaires

Standard: | IP66 | RAL9006 | 5 x 2,5 mm² | -O- | V9B | *i* | F | ⏚ | ⚡
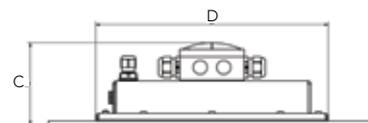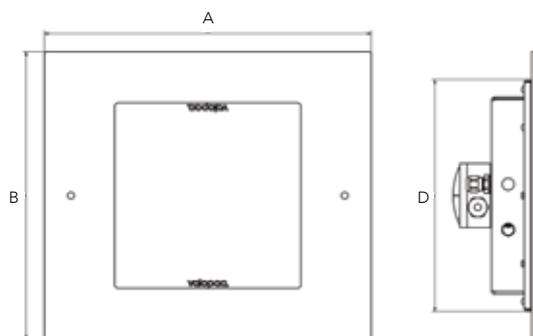
Options: | DALI | 1-10V | PROG

Use for: Underpasses of walkways and roads, undersides of bridges, parking garages, canopies and industrial buildings.

Installation: Recessed, i.e. it is mounted with only the front panel and the light emitting lens of the LED modules left visible under the ceiling structure. All the other parts of the luminaire are inside the ceiling structure.

The LED modules, driver and the front cover are changeable. The front cover of VP2101 is mat lacquer polycarbonate. VP2102 uses opal polycarbonate as front cover.

VP2101	40i	20	40		
VP2102				40i	40
Input power W	0, 4 - 40	20	40	0, 4 - 40	40
Useful quantity of light lm	0, 300 - 3400	1900	3400	0, 130 - 1300	1300
Operating temperature °C	-40…+55				
Weight kg	4.2	4.1	4.1	4.2	4.1
Materials	Painted aluminium and stainless steel.Front cover 6mm polycarbonate, with diffusing lining.				
Fastening	Screw fastening to ceiling material.				
LED lumen maintenance	Compensated	Typically less than 10%/100 000 h		Compensated	Typically less than 10%/100 000 h
Life span $L_{80}B_{10} C_{10} T_a 25$	> 100 000 h	100 000 h	100 000 h	> 100 000 h	100 000 h

	A	B	C	D
Size S	430	380	110	306
Size L	620	450	110	306

Measurements in millimetres

Subject to change without prior notice.

VP2103 & VP2104 LED Canopy Luminaires

Standard:

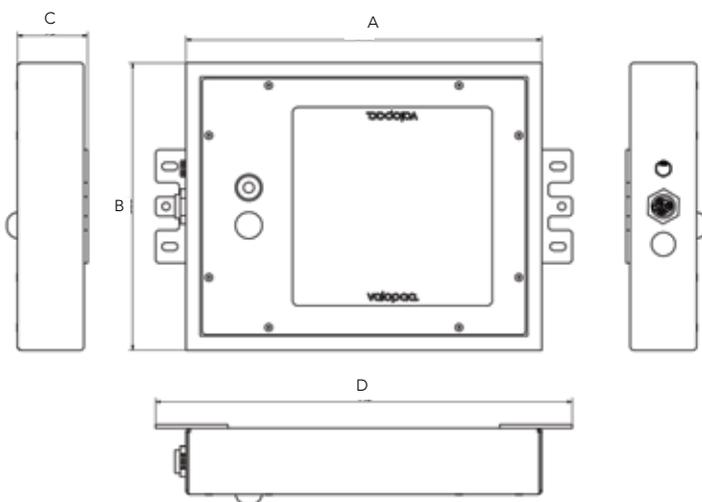| IP66 | RAL9006 | 5 x 2,5 mm² | -O- | V9B | *i* | ⚡ | F | ⏚ |

Options:

| DALI | 1-10V | PROG |

Use for: Parking garages, canopies and industrial buildings.

Installation: Ceiling.

The LED modules, driver and the front cover are changeable. The front cover of VP2103 is mat lacquer polycarbonate. VP2104 uses opal polycarbonate as front cover.

| VP2103	40i	20	40		
VP2104				40i	40
Input power W	0, 4 - 40	20	40	0, 4 - 40	40
Useful quantity of light lm	0, 300 - 3400	1900	3400	0, 130 - 1300	1300
Operating temperature °C	-40…+55				
Weight kg	4.2	4.1	4.1	4.2	4.1
Materials	Painted aluminium and stainless steel. Front cover 6mm polycarbonate, with diffusing lining.				
Fastening	Screw fastening to ceiling material.				
LED lumen maintenance	Compensated	Typically less than 10%/100 000 h		Compensated	Typically less than 10%/100 000 h
Life span $L_{80}B_{10}$ C_{10} T_a 25	> 100 000 h	100 000 h	100 000 h	> 100 000 h	100 000 h

	A	B	C	D
	375	305	75	440

Measurements in millimetres

valopaa.

VP2221 LED Canopy Luminaire

Standard:

| IP65 | RAL9006 | 5 x 2,5 mm² | –O– | V9B | F | ⏚ | ⚡ |

Options:

| PROG |
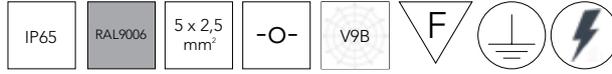
Use for: Underpasses of walkways and roads, bridges, parking garages and canopies.

Installation: Recessed, only the exothermic panel and the light-emitting lens of the LED modules are left visible from under the ceiling structure. All the other parts of the luminaire are left inside the ceiling structure.

The luminaire structure is durable and safe. Vandalism shield installed on top of the LED module and optical lens protects from spray paints and decreases the risk of mechanical strain and damage.

VP2221	M1	M2	M3	M4
Input power W	11	22	33	39
Useful quantity of light lm	1000	2000	3000	4000
Operating temperature °C	-40…+40			
Weight kg	1	4	4	5.1
Materials	Painted (stoved) aluminium and stainless steel.			
Fastening	Screw fastening to ceiling material.			
LED lumen maintenance	Typically less than 10%/100 000 h			
Life span $L_{80}B_{10} C_{10} T_a 25$	100 000 h			
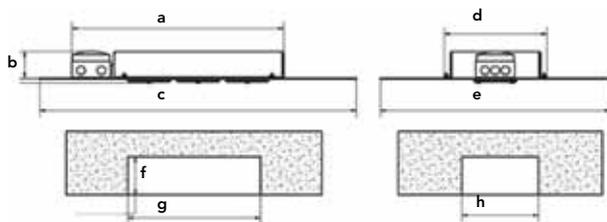
	a	b	c	d	e	f *	g *	h *
M1 S	160	68	200	93	200	min. 100	170	100
M2 S	360	68	400	93	200	min. 100	370	100
M1 L, M2 L, M3, M4	415	68	620	201	450	min. 120	515	325

* In addition, note the space required for the wiring on the sides.

VP2223 LED Canopy Luminaire

Standard:

| IP44 | RAL9006 | 5 x 2,5 mm² | -O- | V9B | F | ⏚ | ⚡ |

Options:

| PROG |

Use for: Underpasses, bridges, tunnels, parking garages, building canopies and industrial buildings.

Vandalism shield installed on top of the LED module and optical lens to protect from spray paints and decreases the risk of mechanical strain and damage.

VP2223	M1	M2	M3	M4
Input power W	11	22	33	39
Useful quantity of light lm	1000	2000	3000	4000
Operating temperature °C	-40…+40			
Weight kg	0.9	2.2	2.4	3.5
Materials	Painted (stoved) aluminium and stainless steel.			
Fastening	Screw fastening to ceiling structure.			
LED lumen maintenance	Typically less than 10%/100 000 h			
Life span $L_{80}B_{10} C_{10} T_a 25$	100 000 h			
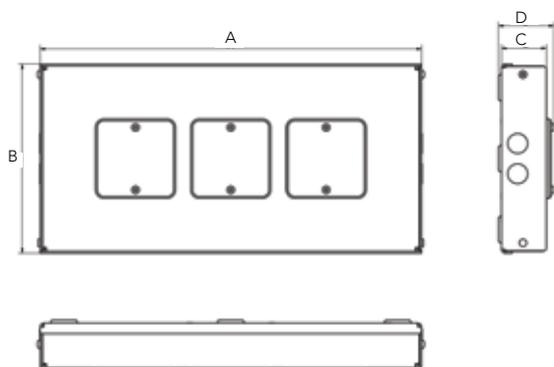
	A	B	C	D
M1	200	200	47	58
M2	400	200	47	58
M3	400	200	47	58
M4	400	400	47	58

Measurements in millimetres

valopaa.

VP2224 LED Canopy Luminaire

Standard:

| IP65 | RAL9006 | 5 x 2,5 mm² | -O- | V9B | F | ⏚ | ⚡ |

Options:

| PROG |
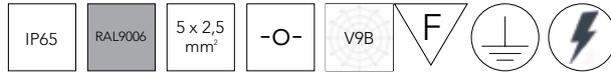
Use for: Demanding environments in road and street lighting.

The VP2224 LED luminaire is approved by the Finnish Transport Agency.

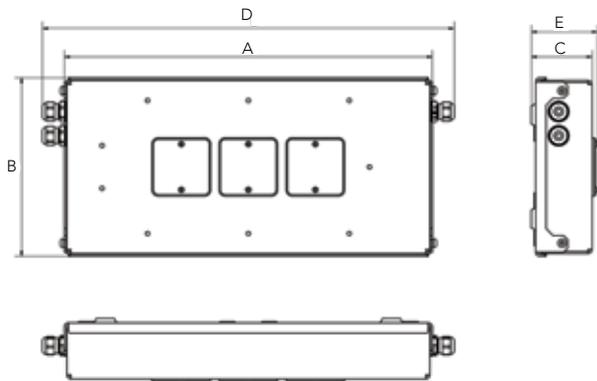| VP2224	M1	M2	M3	M4
Input power W	11	22	33	39
Useful quantity of light lm	1000	2000	3000	4000
Operating temperature °C	-40…+40			
Weight kg	2	5.5	5.7	5.9
Materials	Painted (stoved) aluminium and stainless steel.			
Fastening	Screw fastening to ceiling structure.			
LED lumen maintenance	Typically less than 10%/100 000 h			
Life span $L_{80}B_{10} C_{10} T_a 25$	100 000 h			

	A	B	C	D	E
M1	328	258	88	390	95
M2	528	258	88	590	95
M3	528	258	88	590	95
M4	528	258	88	590	95

Measurements in millimetres

Subject to change without prior notice.

VP2503 LED Industrial Luminaire

Standard: | IP66 | RAL9006 | 5 x 2,5 mm² | -O- | *i* | F | ⏚ | ⚡ | LEDiL

Options: | 🟩🟦🟥🟨 | DALI | 1-10V | PROG

Use for: Sports facilities, industrial halls and warehouses.

Installation: Horizontal wire rope, or directly to ceiling, wall or rail with the shaft

All electronics and connecting devices have been placed out of the heating range of the LEDs in order to ensure long lifetimes also in warm conditions. The luminaire is also available with tempered front glass to ensure better encapsulation.

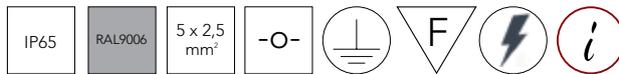| VP2503	200 i	300 i	200	300
Input power W	0, 20 - 200	0, 30 - 300	200	300
Useful quantity of light lm	0, 2000 - 20000	0, 3000 - 30 000	20 000	30 000
Operating temperature °C	-40…+40	-40…+30	-40…+40	
Weight kg	12			
Materials	Painted (stoved) aluminium and stainless steel.			
Fastening	Screw fastening to ceiling, wall or rail, or hanging from a wire rope.			
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.		Typically less than 10%/100 000 h	
Life span $L_{80}B_{10} C_{10} T_a 25$	> 100 000 h		100 000 h	
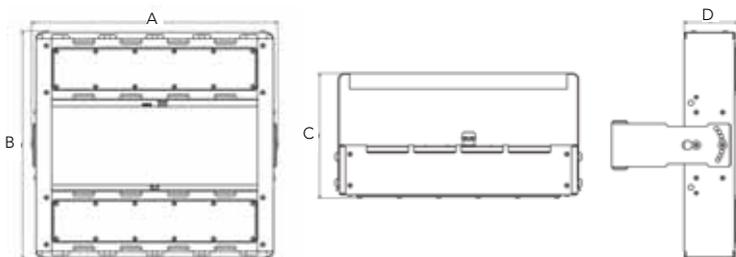
	A	B	C	D
200, 300	470	440	295	102

Measurements in millimetres

VP3233 LED Floodlight Luminaire

Standard: | IP65 | RAL9006 | 5 x 2,5 mm² | -O- | (earth symbol) | F | (lightning symbol) | i |

Options: | PROG |

Use for: Area and staircase lighting. Work lights when supplied with electrical cords. Street lighting when installed to horizontal wire rope or bridge structure.
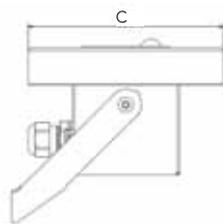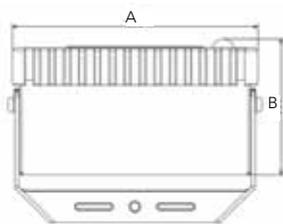
Installation: With screws or U-bolts to walls or poles.

VP3233	M1i	M2i	M1	M2
Input power W	0, 7 - 17	0, 4 - 36	11 [1] 17 [2]	22 [1] 36 [2]
Useful quantity of light lm	0, 700 - 1700	0, 400 - 2700 lm	1000 [1] 1700 [2]	2000 [1] 2700 [2]
Operating temperature °C	-40…+55		-40…+55 [1] , -40…+40 [2]	
Weight kg	1.5	2.0	1.5	2.0
Materials	Painted aluminium and stainless steel.			
Fastening	Screw fastening to ceiling, wall or pole.			
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.		Typically less than 10%/100 000 h	
Life span $L_{80}B_{10}C_{10}T_a25$	> 100 000 h		100 000 h	

[1] 350 mA LED current
[2] 700 mA LED current

	A	B	C
	195	110	95

Measurements in millimetres

Subject to change without prior notice.

VP3511 LED Floodlight Luminaire

Standard:

| IP66 | RAL7024 | 5 x 2,5 mm² | -O- | i | ⏚ | F | ⚡ |

Options:

| | RGBW | DALI | 1-10V | PROG |

Use for: Both indoor and outdoor use. Spotlighting and area lighting. Street lighting when installed to horizontal wire rope or bridge structure.

Installation: Ceilings, walls or poles. The installation angle is fully adjustable and the luminaire can be aligned as needed.

Available also with pre-installed power cables, making the floodlights easy to use and move according to needs, e.g. at construction sites.

VP3511	70i	140i	280i	70	140	280
Input power W	0, 9 - 70	0, 16 - 140	0, 32 - 280	70	140	280
Useful quantity of light lm	0, 900 - 7500	0, 1600 - 13200	0, 3200 - 26400	7500	13200	26400
Operating temperature °C	-40…+55	-40…+55	-40…+40	-40…+55	-40…+40	-40…+40
Weight kg	5.7	6.9	9.5	5.5	6.7	9.3
Materials	Painted (stoved) aluminium and stainless steel.					
Fastening	Screw fastening to ceiling, wall or pole.					
LED lumen maintenance	Compensated with a patented method that is based on the actualized power usage.			Typically less than 10%/100 000 h		
Life span $L_{80}B_{10} C_{10} T_a 25$	> 100 000 h			100 000 h		

VP3511	100i RGBW
Input power W	100
Useful quantity of light lm	4300 (CCT 4000K, CRI70)
Operating temperature °C	-40…+55
Light control method	iLUMNET or DMX
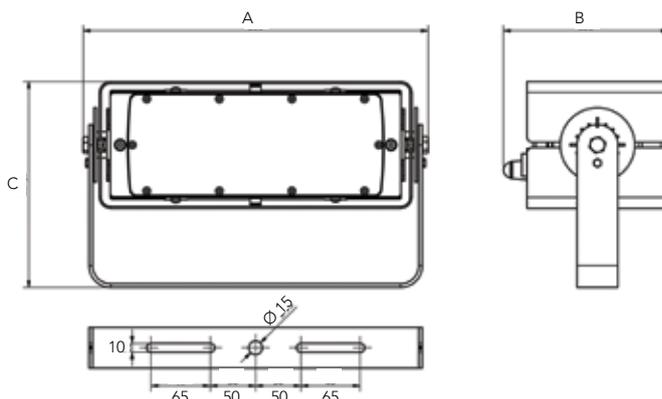
	A	B	C
70, 70i	380	181	227,5
140, 140i	380	181	227,5
280, 280i	385	181	353,5
100i RGBW	380	181	227,5

Measurements in millimetres

Ø 15

10

65 50 50 65

Subject to change without prior notice.

References and applications

Intelligent street and road lighting

Street and road luminaires can be defined into a single or several areas. You can add intelligency to underpasses, tunnels and crosswalks - for example.

With the future-proof cloud-based iLUMNET system, there is no limit to the amount of luminaires the system can control – it scales to your needs.
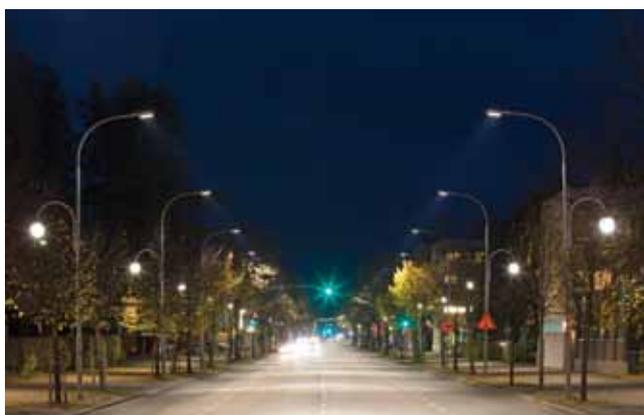
Keskuskatu (Central street), Pieksämäki, Finland
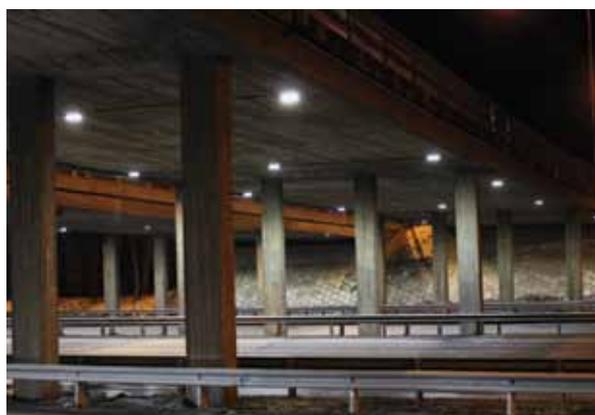
Underpasses, Oulu, Finland

Intelligent lighting, parks

Intelligent lighting is useful solution for recreational parks, playgrounds and public parks. Valopaa solution makes possible to precise customization, both in controlling and luminaire attributes like optics and colour temperature.

The iLUMNET system offers a wide range of tools for controlling lighting. The switching on and off of luminaires as well as the level of brightness can be adjusted according to the level of light in the environment or due to weather conditions or due to requirements of specific event.

Hupisaaret Park, Oulu, Finland

Helsinki Allas, Finland

Subject to change without prior notice.

Accent lighting

The colour of light and the colour temperature are key ingredients in accent lighting, and thanks to Valopaa's modular platform those can be specified precisely to customer's needs. Valopaa's optical solutions increase energy efficiency and light alignment

Intelligent control and RGBW luminaires can create fantastic environments and vivacity to facades, only imagination is the limit.

Grouwels Vastgoed BV Maastricht, Netherlands

Intelligent lighting control, tower of Tietomaa Oulu, Finland

Intelligent lighting, indoor halls

Valopaa offers a variety of solutions for lighting of industrial estates, different types of indoor halls and multi-storey car parks.

Valopaa has created intelligent LED luminaire concept for parking garages, but it is well suited for all premises where small size and slim structure are needed.

Tikkaparkki car park, Joensuu, Finland

NHL sized ice rink, Leppävirta, Finland

Spare part service and warranty

High quality spare parts for reliable operations

OEM (original equipment manufacturer) parts are critical for maintaining optimal performance of your Valopaa luminaires and controlling system. We offer a full range of OEM spare parts, tools and consumables for all Valopaa products.

The reliability of parts and components is crucial – an installation with optimised performance and maximised utilisation rate is also a profitable installation.

To avoid unnecessary downtime, parts and components should be readily available to be supplied when and where needed.

We are committed to stock OEM parts (original or equivalent) for 10 years after product has been discontinued. Essential features such as colour temperature, lumen output and optics, are traceable with the serial number of the LED module, and the compatibility of the spare part can be ensured.

Spare part support for registered customers.

Warranty

Valopaa endows all products with a CE marking, indicating that the products fulfill all required standards.

Valopaa luminaires have warranty period of ten (10) years from the date of shipment from Valopaa Ltd's facilities. Full warranty document upon request or can be downloaded from www.valopaa.com

Contact

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valopaa. LUMINATION

Symbols

230 V 50 Hz	The operating voltage of standard products is 230VAC/50Hz and protection class I. Several luminaires are available also for operating voltage of 110V$_{AC.}$
IP65	IP class. The stated IP class is always for installed luminaires.
4000K CRI >70 McAdam5 / K CRI McAdam	Typically colour temperature of light is 4000 K, colour rendering index is > 70 and MacAdam ellipse is 5 with standard luminaire. K, CRI and MacAdam changes available as an option, with limitations from the LED manufacturer.
	It is possible to use colour LEDs. The colour LEDs are available as an option with limitations from the LED manufacture.
RAL9003 / RAL classic colours	The casing colour. RAL classic colour as well as other finish gloss levels and structures are available as an option.
Aluminium	The casing for all VP LED luminaires is made of alumium. This symbol indicates that the casing of the luminaire is anodised, thereby the colour of the product is aluminium.
	Luminaire is grounded.
F	Luminaire can be directly mounted on a normally flammable surface.
5 x 2,5 mm^2 / 3 x 2,5 mm^2	The connection cable type of the luminaire.
-O- / -O	The connection of the luminaires.
V9B	Light distribution of standard product. You can select any optical lens from Valopaa selection as option.
i	Luminaires are available as intelligent versions (i).
S	Intelligent luminaires with internal sensors (s).
DALI	Luminaire is available with the DALI control system compatible drivers.
1-10V	Luminaire is available with 1-10V$_{DC}$ dimmable drivers.
PROG	Programmable dimming and power level.
	Surge protection.
RoHS	All Valopaa products are made from RoHS compliant components and materials.
	All VP LED luminaires are fully recyclable and they do not contain hazardous waste or other dangerous materials.
CE	The CE marking is the manufacturer's declaration that the product meets the requirements of the applicable EC directives.

valopaa. ILUMINATION

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iLUMINATION