



# LIGHTING SOLUTIONS WITH REPLACEABLE LIGHT SOURCE

## FOR PROFESSIONAL USE

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Helping you to see things in better light!

 valtavalon

# CONTENT

INTRODUCTION

LUMINAIRE PACKAGES

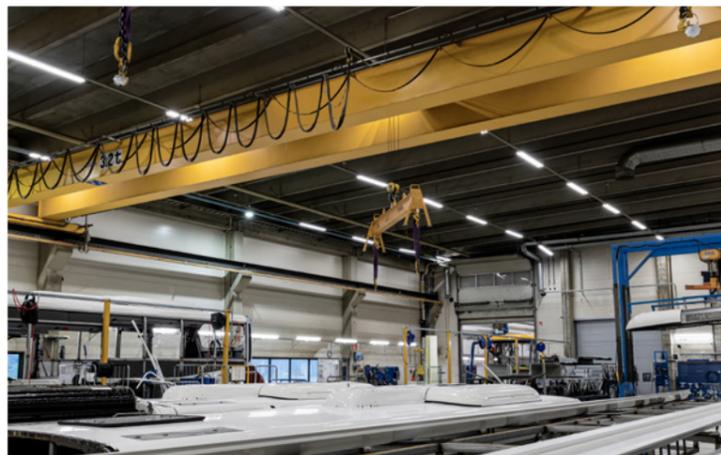
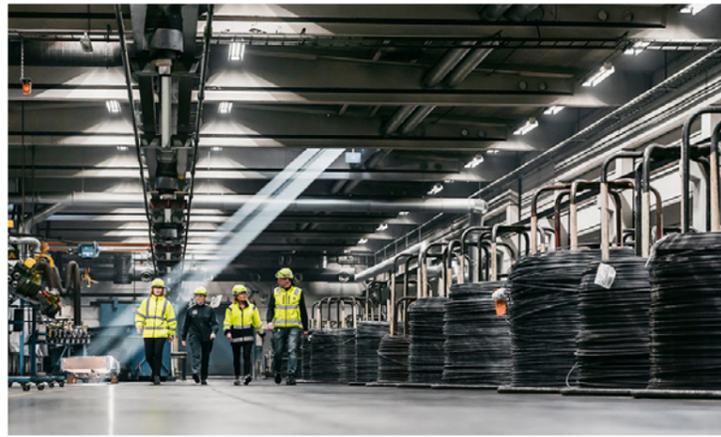
LUMINAIRES

LIGHT SOURCES

ADDITIONAL INFORMATION



Lighting solutions  
with standardised  
replaceable light sources  
for professional use



## Valtavallo Ltd

Valtavallo Ltd, founded in 2008, is a lighting company with own development and production in Finland. We create energy-efficient lighting solutions with a focus on replaceability, flexibility and long lifetime, for the best possible total cost of ownership.

Our concept is based on a standardised (EN62776) replaceable light source, a LED tube, that can be easily installed to an existing fluorescent luminaire or to a completely new luminaire designed for LED tubes. A luminaire with a replaceable light source is an ecological and high-quality solution that saves money and nature. Changing light sources in the future is easy, which can bring considerable savings to maintenance and upkeep costs particularly if the luminaires are installed in a location that is hard to access.

Manufacturing industry realised early on the benefits of solution, and is today one of our most important customer segments thanks to the reliability and ability of our products in demanding environments. Our concept has proven to be successful also in warehouses, logistics and retail premises as well as in sports facilities, parking garages, hospitals and schools.



**VALTAVALLO  
in a nutshell**

- \* The leading manufacturer of LED tubes in the Nordic countries since 2008
- \* Production and logistics facilities in Kajaani, Finland; administrative office in Oulu, Finland
- \* Branch office in Sweden, representation around Europe
- \* ISO 9001 and 14001 -certified by SGS

## Manufacturing in Finland

In 2010, we started a development process for manufacturing LED tubes in Finland. As a result, we opened our fully automatic assembly line and manufactured the first record-breaking LED tubes in 2012. Later, another automatic production line was placed in the factory.

At the end of a fully automated production process, the electrical and photometric properties of each LED tube are carefully tested, ensuring that our customers can rely on the high quality of our products. We proudly carry the Key Flag symbol awarded to our company by the Association for Finnish Work as a sign of Finnish manufacture.

Valtavallo's operations in Finland are certified according to the quality management standard ISO 9001:2015 and the environmental management standard ISO 14001:2015. The starting point of our product philosophy and operations is always to find the best possible solution to the customer's needs. Thanks to this, we have been at the forefront of development in one of the most competitive industries since the establishment of the company in 2008.



We do sustainable choices for our environment and provide energy-saving and environmentally friendly alternatives.

**Solution with replaceable light source is a sustainable and ecological choice.**

## **LONG LIFETIME, REPLACEABILITY, LOW ENVIRONMENTAL IMPACT**

Energy-efficient lighting plays a key role in reducing energy use in buildings and is therefore a cost-effective way of combating climate change. In our solutions, all wearing parts are replaceable and recyclable. Thanks to its maintainability, a solution with replaceable light source has a lower environmental impact compared to a solution where the entire luminaire has to be replaced due to breakage.

Today, our solutions illuminating buildings across Europe save around 4,000 tons of CO<sub>2</sub> emissions per year, which is equal to the emissions of over 8,000 flights from Helsinki to New York. In this way, together with our customers, we create a more sustainable tomorrow.

## MAKE A **SUSTAINABLE** CHOICE

The replaceable light source solution ensures carefree lighting for years to come. The standard light sources used in the luminaires are easy to install and replace on the luminaire body, regardless of the manufacturer. In turn, the luminaire bodies have no separate ballasts to break and are maintenance-free. This keeps maintenance costs low, as the lighting can be upgraded simply by replacing the light source in the luminaire.



Easily replaceable  
light sources



Simple upgrade and  
low maintenance costs



Availability and  
brand independency



A reliable partner with more  
than 10 years of experience



Environmentally-friendly  
choice



Manufacturing  
in Finland

## MODERN LIGHTING **WITH REPLACEABLE LIGHT SOURCE**

– also with intelligent control

Lighting control is mainly used to regulate the level of light in a defined space as well as to save energy. Using lighting control can prolong the lifetime and service interval of luminaires. Our solutions can be supplied with either on-off control, dimming of individual luminaires (LED dimmer, Trailing Edge Dimming) and SwitchDim or DALI control.

We always recommend the most appropriate and cost-effective solution for the customer - in some cases on-off control can be the smartest choice. On-off control based on motion sensors is a simple, inexpensive and easy-to-maintain solution. Turning the lights off always saves more energy than dimming. Motion detectors can be used to directly control individual luminaires or larger units, for example with the help of contactors. In addition, motion detectors can be pre-programmed by room or group.

Valtavallo E-Series, G4 and G5 Regular, High Power and High Temp LED tubes are ideal for on-off control. If the solution results in the use of LED dimmer, SwitchDim control or DALI system, G5 Dimmable LED tube from the G5 product family is selected as a light source.

# HIGH-QUALITY LIGHTING SOLUTIONS FOR DIFFERENT ENVIRONMENTS

A durable option also for challenging production facilities

The starting point for our product philosophy has always been to find the best solution for the customer - be it office space, hospital or even challenging industrial premise - and our wide product range covers the lighting needs of the public and private sectors well. Replaceable light sources enable implementing lighting with a long lifecycle in a variety of facilities, no matter the industry. High-quality LED lighting has been proven to increase the safety and efficiency of work. As a result, it benefits both the employer and the employees, and investments made in lighting quickly repay themselves.



Food industry



Logistics



Manufacturing industry



Store lighting



Public spaces, offices



School lighting



Public transport



Hospital lighting



Indoor sport facilities



Parking

## LUMINAIRE PACKAGES

To make it easy to choose the right solution among all the different options we offer, we have put together ready-made packages with luminaire and light source. The solution provides you with maintenance-free lighting for a long time to come. When it's time for replacement next time, simply replace the light sources with new ones instead of the entire luminaire.



### Teva slim – open-housing luminaire with replaceable light sources

Typical applications for Valtavalo Teva slim are large and high spaces such as shops, warehouses and industrial premises. The luminaire uses a standard LED tube as a replaceable light source, which contains everything needed to create high-quality lighting. Depending on the lighting needs, you can choose Teva with a variety of light sources and configurations.

DESCRIPTION	LENGTH	LIGHT SOURCE	POWER	COLOUR TEMPERATURE	RATED LUMINOUS FLUX	LIGHT DISTRIBUTION
Teva 36W, with replaceable G5 light source	1225 mm	G5 regular	2 x 18 W	4000 K	6000 lm	120°
Teva 44W, with replaceable G5 light source	1525 mm	G5 regular	2 x 22 W	4000 K	7400 lm	120°
Teva 66W, with replaceable G5 light source	1525 mm	G5 regular	3 x 22 W	4000 K	11 100 lm	120°
Teva 105W, with replaceable High Power light source	1525 mm	High Power	3 x 35 W	4000 K	15 400 lm	120°
Teva 70W, with replaceable Narrow Beam light source	1525 mm	Narrow Beam	2 x 35 W	4000 K	11 000 lm	45°
Teva 38W, with replaceable E3+ light source	1225 mm	E3+	2 x 19 W	4000 K	5150 lm	200°
Teva 48W, with replaceable E3+ light source	1525 mm	E3+	2 x 24 W	4000 K	6650 lm	200°
Teva 72W, with replaceable E3+ light source	1525 mm	E3+	3 x 24 W	4000 K	9800 lm	200°



### Prima plus - Industrial luminaire (IP66, IK10) with replaceable LED light source for demanding installations

Typical applications for Valtavalo Prima plus include car parks, industrial halls and cold rooms. The luminaire uses a standard LED tube as a replaceable light source, which contains everything needed to create high-quality lighting. Depending on your lighting needs, you can choose Prima plus with a variety of light sources.

DESCRIPTION	LENGTH	LIGHT SOURCE	POWER	COLOUR TEMPERATURE	RATED LUMINOUS FLUX
Prima 18W, with replaceable G5 light source	1280 mm	G5 regular	1 x 18 W	4000 K	2850 lm
Prima 36W, with replaceable G5 light source	1280 mm	G5 regular	2 x 18 W	4000 K	5700 lm
Prima 22W, with replaceable G5 light source	1580 mm	G5 regular	1 x 22 W	4000 K	3500 lm
Prima 44W, with replaceable G5 light source	1580 mm	G5 regular	2 x 22 W	4000 K	7000 lm
Prima 35W, with replaceable High Power light source	1580 mm	High Power	1 x 35 W	4000 K	5050 lm
Prima 70W, with replaceable High Power light source	1580 mm	High Power	2 x 35 W	4000 K	10050 lm
Prima 19W, with replaceable E3+ light source	1280 mm	E3+	1 x 19 W	4000 K	2400 lm
Prima 38W, with replaceable E3+ light source	1280 mm	E3+	2 x 19 W	4000 K	4650 lm
Prima 24W, with replaceable E3+ light source	1580 mm	E3+	1 x 24 W	4000 K	3100 lm
Prima 48W, with replaceable E3+ light source	1580 mm	E3+	2 x 24 W	4000 K	6000 lm



### Uniqa – stylish luminaire with replaceable light sources for offices and public spaces

Typical applications for Valtavalo Uniqa include offices, conference and meeting rooms, commercial premises and other public spaces. It can be pendant mounted or mounted on a lighting rail or directly on the ceiling surface. The luminaire uses a standard LED tube as a replaceable light source, which contains everything needed to create high-quality lighting. Depending on your lighting needs, you can choose Uniqa with a variety of light sources.

DESCRIPTION	LENGTH	LIGHT SOURCE	POWER	COLOUR TEMPERATURE	RATED LUMINOUS FLUX
Uniqa 36W, with replaceable G5 light source	1270 mm	G5 regular	2 x 18 W	4000 K	5350 lm
Uniqa 44W, with replaceable G5 light source	1570 mm	G5 regular	2 x 22 W	4000 K	6600 lm
Uniqa 38W, with replaceable E3+ light source	1270 mm	E3+	2 x 19 W	4000 K	4300 lm
Uniqa 48W, with replaceable E3+ light source	1570 mm	E3+	2 x 24 W	4000 K	5550 lm



### Beat – Versatile luminaire with replaceable light source for offices and public premises

Valtavalo Beat is particularly suitable for use in offices, shops and other public spaces as a high-quality general luminaire. The luminaire uses a standard LED tube as a replaceable light source, which contains everything needed to create high-quality lighting. Depending on your lighting needs, you can choose Beat with a variety of light sources.

DESCRIPTION	LENGTH	LIGHT SOURCE	POWER	COLOUR TEMPERATURE	RATED LUMINOUS FLUX
Beat 36W, IP44, with replaceable G5 light source	1245 mm	G5 regular	1 x 18 W	4000 K	2600 lm
Beat 36W, IP44, with replaceable G5 light source	1245 mm	G5 regular	2 x 18 W	4000 K	5200 lm
Beat 44W, IP44, with replaceable G5 light source	1548 mm	G5 regular	1 x 22 W	4000 K	3200 lm
Beat 44W, IP44, with replaceable G5 light source	1548 mm	G5 regular	2 x 22 W	4000 K	6300 lm
Beat 38W, IP44, with replaceable E3+ light source	1245 mm	E3+	1 x 19 W	4000 K	2250 lm
Beat 38W, IP44, with replaceable E3+ light source	1245 mm	E3+	2 x 19 W	4000 K	4350 lm
Beat 48W, IP44, with replaceable E3+ light source	1548 mm	E3+	1 x 24 W	4000 K	2900 lm
Beat 48W, IP44, with replaceable E3+ light source	1548 mm	E3+	2 x 24 W	4000 K	5600 lm



### Mirko – a modern linear luminaire with a replaceable light source

Mirko is a modern linear luminaire with a replaceable light source, which makes it suitable for a variety of uses. Thanks to its elegant design, it is well suitable for retail or office lighting solutions as well as for public spaces. By default, the luminaire is delivered with a glare reduction grid that preserves the light source's luminous efficacy. Also available with a dome with an opal finish. The luminaire uses a standard LED tube as a replaceable light source, which contains everything needed to create high-quality lighting.

DESCRIPTION	LENGTH	LIGHT SOURCE	POWER	COLOUR TEMPERATURE	RATED LUMINOUS FLUX
Mirko 18W, with replaceable G5 light source	1240 mm	G5 regular	1 x 18 W	4000 K	2550 lm
Mirko 22W, with replaceable G5 light source	1540 mm	G5 regular	1 x 22 W	4000 K	3100 lm



# Uniqa

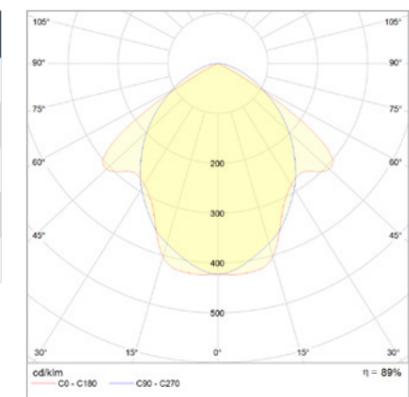
## Elegant LED luminaire with replaceable light source for offices and public premises



Uniqa is a LED luminaire with simple and stylish appearance. Typical applications include for example office areas, conference facilities, business premises and other public spaces. The luminaire uses standardised, replaceable light sources that are easy to install and replace on the luminaire body. Uniqa is also available with direct/indirect light and as recessed version (see pages 16-17). Upon request the luminaire can also be supplied with dimmable SwitchDim or DALI system. UGR<19.

Model	Uniqa 120 cm		Uniqa 150 cm	
Number of light sources	1	2	1	2
Dimensions, mm (length x width x height)	1270 x 184 x 76	1270 x 320 x 76	1570 x 184 x 76	1570 x 320 x 76
Weight, kg (without light sources)	3,5	4,9	3,8	5,3
Socket type	T8 / G13			
Input voltage	230 V AC, 50/60 Hz			
Protection	IP20			
Material	White steel sheet, aluminium louvre			
Installation	Installation on a lighting track or directly to the ceiling. Suspended: wire length of 90 cm in a one-tube luminaire, wire length of 80 cm in a twin tube luminaire.			
Installation height	2–4 m			
Connection	Available also with through-wiring; 5 x 1,5 mm <sup>2</sup> or 5 x 2,5 mm <sup>2</sup> . Feed-throughs at both ends of the luminaire and on top of the luminaire.			
Recommended light source	G5 LED tube (performance values below, see pages 28-33 for more information on light sources)			
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI when Valtavalo G5 Dimmable LED tube is used as a light source.			
Warranty	5 years for luminaire, 5-7 years for light source depending on the model			
Accessories	Motion sensor (infrared), pull cord switch, suspension wire kit, emergency light unit with battery, DALI, SwitchDim			

Recommended light source: Valtavalo G5	VV22E1 50G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	2 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	5100





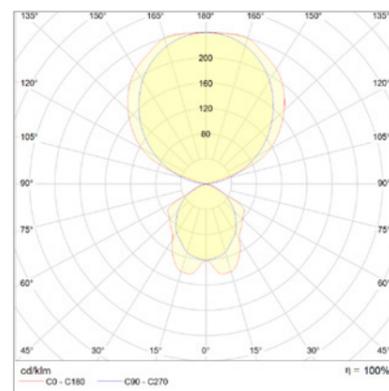
## Uniqa direct/indirect

### Elegant suspended LED luminaire for offices and public premises

Valtavallo Uniqa with direct and indirect light is an elegant LED luminaire for public environments. Direct and indirect light gives a more even light distribution in the room without sharp shadows or contrasts. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be replaced when necessary without a need to consider the manufacturer. On request, the luminaire can also be fitted with a dimmable SwitchDim or DALI. Typical applications include office spaces and conference facilities as well as commercial spaces.

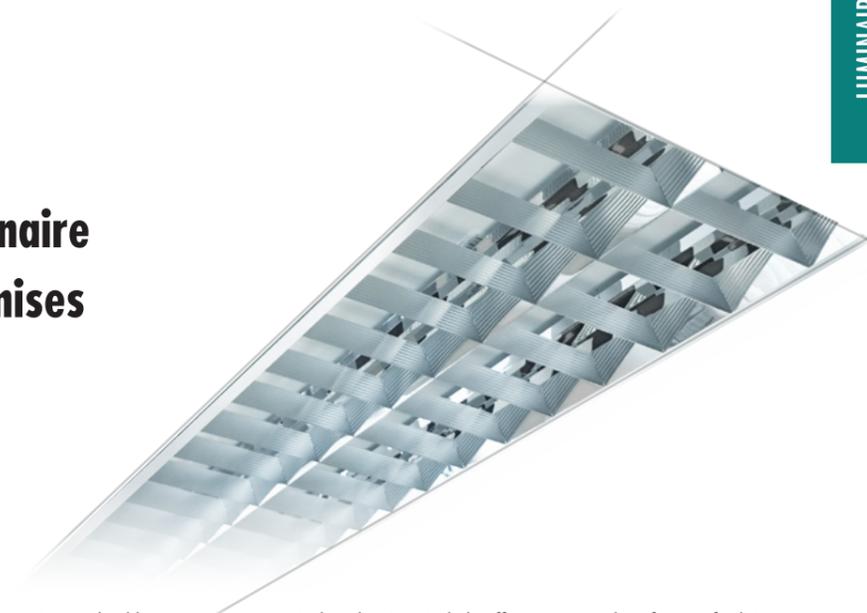
Model	Uniqa direct/indirect 120cm	Uniqa direct/indirect 150cm
Number of light sources	1-3	1-3
Dimensions, mm (length x width x height)	1250 x 260 x 66	1550 x 260 x 66
Weight, kg (without light sources)	5,1	5,5
Socket type	T8/G13	
Input voltage	230 V AC, 50/60 Hz	
Protection	IP20	
Material	White steel sheet, aluminium louvre	
Installation	Suspended from the ceiling with associated wire suspension (max. 1.2 m) (recommended distance between luminaire and ceiling 0.5–0.8 m)	
Installation height	2–4 m	
Recommended light source	G5 LED tube (performance values below, see pages 28-33 for more information on light sources)	
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI control	
Warranty	5 years for luminaire, 5-7 years for light source depending on the model	
Accessories	Pull cord switch (on-off control/dimming control), motion sensor	

Recommended light source: Valtavallo G5	VV22E150G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	3 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	10 550



## Uniqa recessed

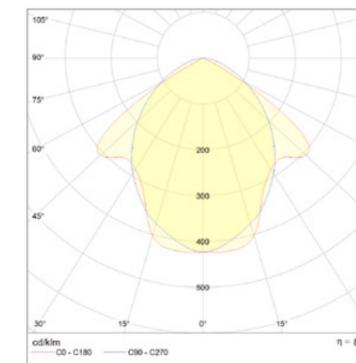
### Elegant recessed LED luminaire for offices and public premises



Valtavallo Uniqa recessed is an elegant LED luminaire for office premises and public environments. Typical applications include office spaces and conference facilities as well as commercial spaces and other public environments. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be replaced when necessary without a need to consider the manufacturer. It can also be fitted with a dimmable Switch-dim or DALI system on request.

Model	Uniqa, recessed 2x60 cm	Uniqa, recessed 4x60 cm	Uniqa, recessed 1x120 cm	Uniqa, recessed 2x120 cm
Number of light sources	2 x 60 cm	4 x 60 cm	1 x 120 cm	2 x 120 cm
Dimensions (length x width x height), mm	625/596 x 296 x 80	625/596 x 596 x 80	1234/1170 x 160 x 80	1234/1170 x 296 x 80
Weight, kg (without light sources)	1,8	3,3	2,1	3,4
Socket type	T8/G13			
Input voltage	230 V AC, 50/60 Hz			
Protection	IP20			
Material	White steel sheet, aluminium louvre			
Installation	Recessed			
Installation height	2–4 m			
Recommended light source	G5 LED tube (performance values below, see pages 28-33 for more information on light sources)			
Lighting control	Uniqa recessed 1x120 cm and 2x120 cm are applicable to dimming with Trailing Edge, SwitchDim or DALI control			
Warranty	5 years for luminaire, 5-7 years for light source depending on the model			
Accessories	Emergency light unit with battery, DALI, SwitchDim			

Recommended light source: Valtavallo G5	VV18E120G5-840
Length (cm)	120
Optics	Semiopal
Power (W)	2 x 18
Colour temperature (K)	4000
Rated luminous flux (lm)	5 150





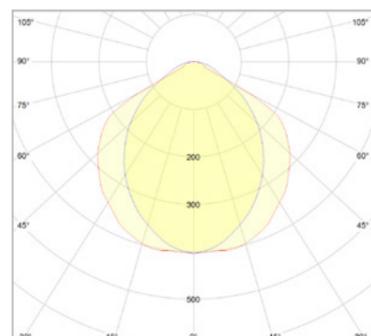
## Mirko

### Modern linear luminaire with replaceable light source

Mirko is a modern linear luminaire with a replaceable light source and suitable for a variety of purposes. Thanks to its elegant design, it is well suitable for retail or office lighting solutions as well as for public spaces. By default, the luminaire is delivered with a glare reduction grid that preserves the light source's luminous efficacy. Also available with a dome with an opal finish. The default colour is white, but the luminaire is also available in grey and black. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be replaced when necessary without a need to consider the manufacturer. We recommend Valtavalo G5 LED tubes as light sources. The luminaire can also be delivered with a dimmable LED tube and control unit suitable for SwitchDim or DALI solutions.

Model	Mirko 120cm	Mirko 150cm
Number of light sources	1	1
Dimensions, length x width x height, mm *with SwitchDim or DALI -control unit	1240 x 65 x 64 *1540 x 65 x 64	1540 x 65 x 64 *1840 x 65 x 64
Weight, kg (without light source) *with SwitchDim or DALI -control unit	2,5 *3,2	2,8 *3,4
Socket type	T8 / G13	
Input voltage	230 V AC, 50/60 Hz	
Protection	IP 40	
Housing material	Aluminium profile	
Cover material	By default, delivered with a glare reduction grid. Also available with a dome with an opal finish.	
Colour options	The default colour is white, available also in grey and black.	
Installation	Ceiling or wall surface, lighting track, suspension cable.	
Installation height	2,5–5 m	
Connection	Through-wiring available by request: 5 x 1,5 mm <sup>2</sup> or 5 x 2,5 mm <sup>2</sup> . Feed-throughs at both ends (2 pcs.) of the luminaire. For suspension installation feed-throughs on the top of the luminaire.	
Recommended light source	For lower spaces (2,5–3 m) G5 22 W LED tube. For higher spaces (3–5 m) High Power 35 W LED tube (see pages 28-33 for more information on light sources)	
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or Dali control when Valtavalo G5 Dimmable LED tube is used as a light source.	
Warranty	5 years for luminaire, 5–7 years for light source depending on the model	
Accessories	Motion sensor (microwave/PIR), SwitchDim, DALI, Stand-Alone DALI, pull cord switch, suspension wire kit	

Recommended light source: Valtavalo G5	VV22E150G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	1 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	3100



Pull cord switch as an accessory

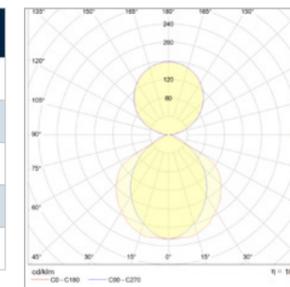
## Mirko direct/indirect light

### Suspended linear luminaire for offices and public premises

Mirko with direct and indirect light is a modern linear luminaire suitable for a variety of purposes. The luminaire's dome provides stable light upward and protects the luminaire from setting dust. Lamella grid reduces glare for the light directed downward. The default colour is white, but the luminaire is also available in grey and black. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be replaced when necessary without a need to consider the manufacturer — we recommend G5 LED tubes as light sources. The luminaire can also be delivered with a dimmable LED tube and control unit suitable for SwitchDim or DALI solutions.

Model	Mirko 150cm
Number of light sources	2
Dimensions, l x w x h, mm *dimensions with SwitchDim or DALI control unit	1618 x 65 x 127 *1918 x 65 x 127
Weight, kg (without light sources) *weight with SwitchDim or DALI control unit	5,8 *6,9
Socket type	T8 / G13
Input voltage	230 V AC, 50/60 Hz
Protection	IP 40
Housing material	Aluminium profile
Cover options	By default, lower light with a glare reduction grid and upper light with a dome with an opal finish. Lower light available also with an opal finish.
Colour options	The default colour is white, available also in grey and black.
Installation	Wire suspension set (included)
Installation height	2,5-5 m
Kytentä	Terminal connector 3 x 2,5 mm <sup>2</sup>
Recommended light source	Lower spaces (2,5-3 m) G5 22 W LED tube. Higher spaces (3-5 m) High Power 35 W LED tube (see pages 28-33 for more information on light sources)
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or Dali-control when Valtavalo G5 Dimmable LED tube is used as a light source.
Warranty	5 years for luminaire, 5-7 years for light source depending on the model
Accessories	Motion sensor (microwave/PIR), SwitchDim, DALI, Stand-Alone DALI, pull cord switch

Recommended light source: Valtavalo G5	VV22E150G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	2 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	5650





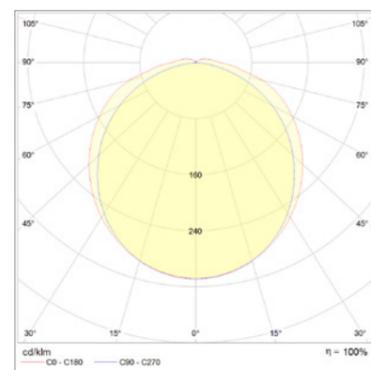
## Teva slim

### Open-housing LED luminaire for industrial and public premises

Teva slim is an open-housing industrial luminaire designed for 1, 2 or 3 LED tubes, enabling an easy adjustment of the amount of light by adding more tubes or removing existing ones as the lighting requirements change. Typical applications include large and high spaces, such as stores, warehouses or industrial facilities, but the luminaire is ideal for any type of new construction and renovation that requires a lot of light. Teva slim uses standardised, replaceable light sources that are easy to install and replace on the luminaire body when necessary regardless of the manufacturer. Upon request the luminaire can also be supplied with dimmable SwitchDim or DALI system.

Model	Teva slim 120 cm			Teva slim 150 cm		
Number of light sources	1	2	3	1	2	3
Dimensions, mm (length x width x height)	1225x57x70	1225x80x70	1225x122x70	1525x57x70	1525x80x70	1525x122x70
Weight, kg (without light sources)	1,4	1,5	1,6	1,7	1,9	2
Socket type	T8 / G13					
Input voltage	230 V AC, 50/60 Hz					
Protection	IP20					
Material	White powder coated steel					
Installation	Ceiling surface, suspension rail					
Installation height	2–11 m					
Connection	Through-wired version available upon request. 5-pole screwless terminal block 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> .					
Recommended light source	G5 150 LED tube (performance values below, see pages 28-33 for more information on light sources)					
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI control					
Warranty	5 years for luminaire, 5–7 years for light source depending on the model					
Accessories	SwitchDim, DALI, Stand-Alone DALI, pair of end brackets (also 45° angle), emergency light unit with battery					

Recommended light source: Valtavalo G5	VV22E150G5-840	
Length (cm)	150	
Optics	Semiopal	
Power (W)	2 x 22	3x22
Colour temperature (K)	4000	
Rated luminous flux (lm)	7200	10750



## Beat

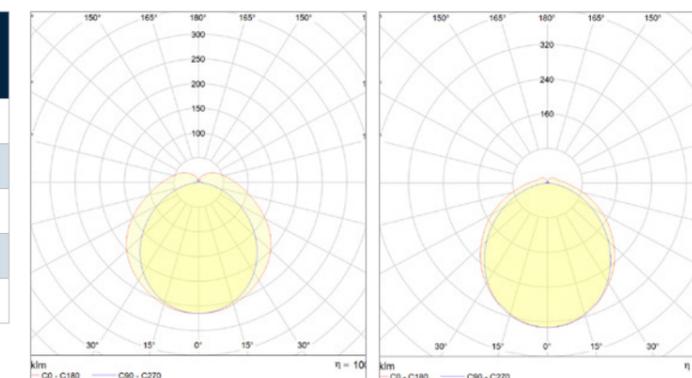
### Versatile luminaire for offices and public premises



Beat is particularly well suited for general lighting in office spaces and public premises. Due to its opal acrylic cover with a satinised surface, it provides soft light that brightens up the room beautifully and efficiently. Beat can be surface-mounted on a ceiling and wall or suspended with a suspension track. Beat uses standardised, replaceable light sources that are easy to install and replace on the luminaire body when necessary without a need to consider the manufacturer.

Model	Beat 120 cm		Beat 150 cm	
Number of light sources	1	2	1	2
Dimensions (length x width x height), mm	1245 x 146 x 58	1245 x 146 x 58	1245 x 146 x 58	1245 x 146 x 58
Weight, kg (without light sources)	1,2	1,7	1,6	2,0
Socket type	T8 / G13			
Input voltage	230 V AC, 50/60 Hz			
Protection	IP44			
Material	Housing of white powder coated steel, cover of polycarbonate, end caps of ABS-plastic			
Installation	Ceiling or wall surface			
Installation height	2–4 m			
Connection	Through-wired version of Beat with two tubes available upon request. 5-pole screwless terminal block 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> .			
Recommended light source	G- or E-series 150 cm and 120 cm (performance values below, see pages 28-33 for more information on light sources)			
Warranty	5 years for luminaire, 5-7 years for light source depending on the model			
Accessories	Accessories available for Beat with two tubes: Motion sensor (microwave) and emergency light unit with battery			

Recommended light sources	Valtavalo E3+ VV24F150E3P-840	Valtavalo G5 VV22E150G5-840
Length (cm)	150	150
Optics	Opal	Semiopal
Power (W)	2 x 24	2 x 22
Colour temperature (K)	4000	4000
Rated luminous flux (lm)	5600	6350



E3+ 150 cm 2x24W

G5 150 cm 2x22W



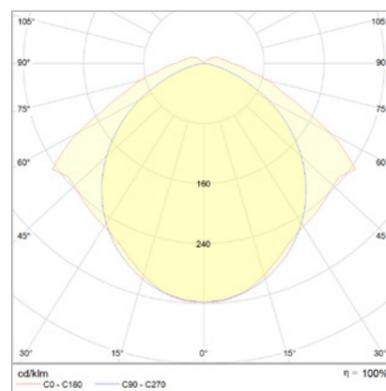
## Prima plus

### IP-66 industrial luminaire for challenging operating conditions

Prima plus is an industrial luminaire that is ideal for example for parking facilities, industrial halls and cold stores. With polycarbonate housing and IP66 protection, Prima is particularly suitable for lighting spaces where dust and moisture are present. It can be installed on ceiling or wall surfaces, or on suspension rails. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be replaced when necessary without a need to consider the manufacturer. Equipped with high-quality LED tubes, the luminaire results in a long-lasting and carefree lighting solution for even the most challenging spaces. Upon request the luminaire can also be supplied with dimmable Switch-Dim or DALI system.

Model	Prima plus 60 cm		Prima plus 120 cm		Prima plus 150 cm	
Number of light sources	1	2	1	2	1	2
Dimensions, mm (length x width x height)	670 x 95 x 100	670 x 145 x 100	1280 x 95 x 100	1280 x 145 x 100	1580 x 95 x 100	1580 x 145 x 100
Weight, kg (without light sources)	1,3	2,0	2,2	2,7	2,9	3,7
Socket type	T8 / G13					
Input voltage	230 V AC, 50/60 Hz					
Protection	IP-66, D-class, IK10					
Material	Impact resistance polycarbonate, latches of stainless steel					
Installation	Ceiling or wall surfaces, suspension rails					
Installation height	2–5 m					
Connection	Through-wired version available upon request: 5 x 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> . Cable clamps (2 pcs.) at both ends of luminaire.					
Recommended light source	G5 LED tube (performance values below, see pages 28-33 for more information on light sources)					
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI-control					
Warranty	5 years for luminaire, 5-7 years for light source depending on the model					
Accessories	Motion sensor (microwave), Emergency light unit with battery, Stand-Alone DALI, SwitchDim, DALI					

Recommended light source: Valtavalo G5	VV22E150G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	2 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	7050



## Prima trio

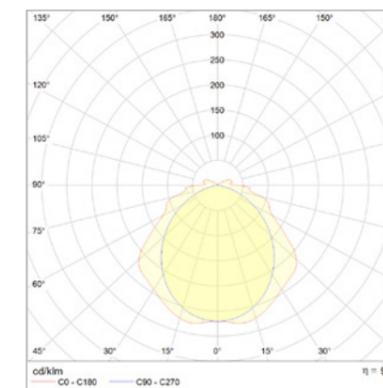
### IP-66 industrial luminaire for challenging operating conditions



Prima trio is an industrial luminaire that is ideal for example for parking facilities, industrial halls and cold stores. With polycarbonate housing and IP66 protection, Prima is particularly suitable for lighting spaces where dust and moisture are present. It can be installed on ceiling or wall surfaces, or on suspension rails. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be easily replaced when necessary. Equipped with high-quality LED tubes, the luminaire results in a long-lasting and carefree lighting solution for even the most challenging spaces. It is applicable for LED tubes only and can not be used with traditional fluorescent tubes. Upon request the luminaire can also be supplied with dimmable Switch-Dim or DALI system.

Model	Prima trio 150 cm
Number of light sources	3
Dimensions, mm (length x width x height)	1576 x 170 x 110
Weight, kg (without light sources)	3,9
Socket type	T8 / G13
Input voltage	230 V AC, 50/60 Hz
Protection	IP-66, D-class, IK07
Material	Glass fibre reinforced polycarbonate, polymethacrylate, latches of stainless steel
Installation	Ceiling or wall surfaces, suspension rails
Installation height	3–9 m
Connection	Through-wired version available upon request: 5 x 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> . Cable clamps (2 pcs.) at both ends of luminaire.
Recommended light source	G5 High Temp (performance values below, see pages 28-33 for more information on light sources)
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI-control
Warranty	5 years for luminaire, 5-7 years for light source depending on the model
Accessories	Emergency light unit with battery, SwitchDim, DALI

Recommended light source: Valtavalo G5 High Temp	VV22E150HT-840
Length (cm)	150
Optics	Semiopal
Power (W)	3 x 22
Colour temperature (K)	4 000
Rated luminous flux (lm)	10 000





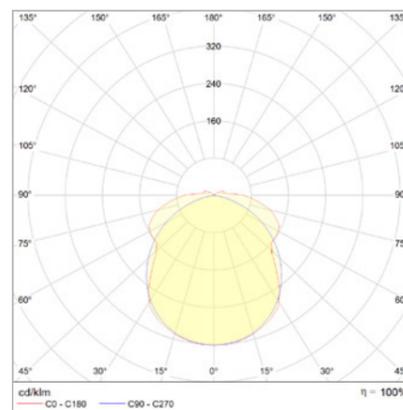
## Ancora

### Industrial LED luminaire for challenging operating conditions

Ancora is an industrial luminaire designed for challenging operating conditions. Due to the housing made of fibre-reinforced polyester and the cover made of PMMA, it is particularly suitable for agricultural buildings. Typical applications include also workshop halls, warehouses, corridors, subway tunnels, cellars, mills, gas stations etc. Waterproof IP65 Ancora can also be installed outdoors, when covered and protected from direct weather conditions. The luminaire uses standardised, replaceable light sources that are easy to install and replace on the luminaire body. Equipped with high-quality LED tubes, it results in a long-lasting, carefree lighting solution also for challenging environments. Upon request it can also be supplied with Trailing Edge, SwitchDim or DALI-control.

Model	Ancora 60 cm		Ancora 120 cm		Ancora 150 cm	
Number of LED tubes	1	2	1	2	1	2
Dimensions (length x width x height), mm	677 x 90 x 95	677 x 116 x 95	1277 x 90 x 95	1277 x 116 x 95	1577 x 90 x 95	1577 x 116 x 95
Weight, kg (without light sources)	1,5	2,1	1,8	2,7	2,3	3,7
Socket type	T8 / G13					
Input voltage	230 V AC, 50/60 Hz					
Protection	IP65, D-class, IK02					
Material	Fibre-reinforced polyester, PMMA (akrylic), latches of polyamide (recommended for agricultural premises), available also of stainless steel					
Installation	Ceiling or wall surfaces, suspension rail					
Installation height	2–5 m					
Connection	Through-wired version available upon request: 5 x 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> . Cable clamps (2 pcs.) at both ends of luminaire.					
Recommended light source	G5 LED tube (performance values below, see pages 28-33 for more information on light sources)					
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI-control					
Warranty	5 years for luminaire, 5-7 years for light source depending on the model					
Accessories	Motion sensor (micro wave), Emergency light unit with battery, SwitchDim, DALI					

Recommended light source: Valtavallo G5	VW22E150G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	2 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	6800



## Anticor

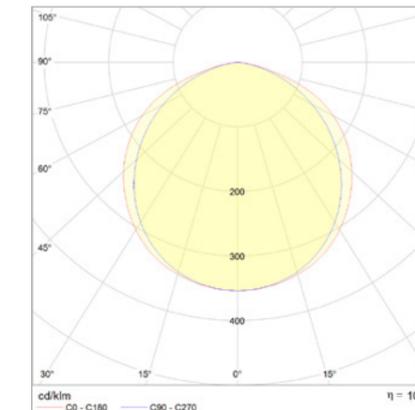
### Industrial LED luminaire for challenging operating conditions



Anticor is an industrial luminaire designed for challenging operating conditions. Typical applications include industrial interior and exterior spaces, agricultural buildings, warehouses and work shops. IP65 Anticor, with a housing made of stainless steel and a cover made of tempered glass, is resistant to dust, moisture and splashing water. The luminaire uses standardised, replaceable light sources that are easy to install and replace on the luminaire body. Equipped with high-quality LED tubes, it results in a long-lasting, carefree lighting solution also for challenging environments. Upon request it can also be supplied with Trailing Edge, SwitchDim or DALI-control.

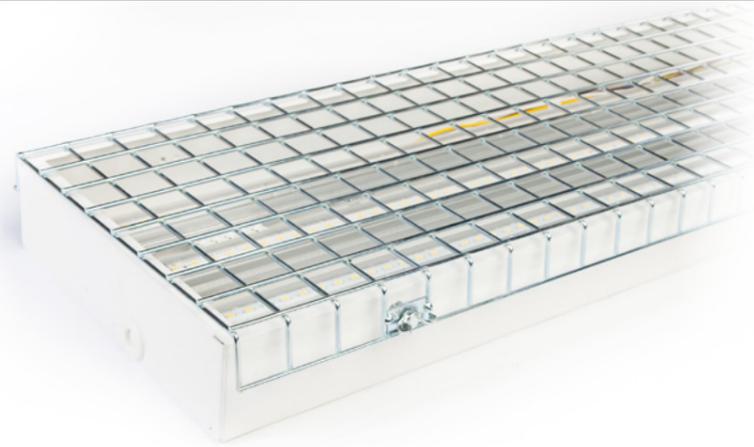
Model	Anticor 120 cm	Anticor 150 cm
Number of LED tubes	2	2
Dimensions (length x width x height, mm)	1305 x 200 x 95	1505 x 200 x 95
Weight, kg	7,7	10,6
Socket type	T8 / G13	
Input voltage	230 V AC, 50/60 Hz	
Protection	IP65, D-class, IK10	
Material	Anti-corrosive stainless steel, tempered glass	
Installation	Suspension rail, suspension mounting	
Installation height	2-6 m	
Connection	Through-wired version available upon request: 5 x 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> . Cable clamps (2 pcs.) at both ends of luminaire.	
Recommended light source	G5 High Temp (performance values below, see pages 28-33 for more information on light sources)	
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI-control	
Warranty	5 years for luminaire, 5-7 years for light source depending on the model	
Accessories	Motion sensor (micro wave), Emergency light unit with battery, SwitchDim, DALI. Can be upgraded with transparent heat-resistant guard film that prevents glass fragmentation.	

Recommended light source: Valtavallo G5 High Temp	VW22E150HT-840
Length (cm)	150
Optics	Semiopal
Power (W)	2 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	5870



# Game

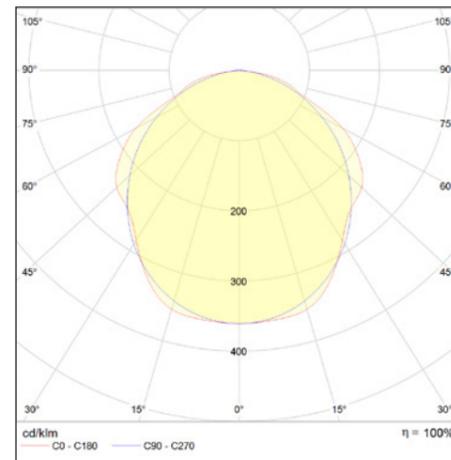
## Ballproof luminaire for indoor sports facilities



The solid and robust Game luminaire is suitable for use in school gymnasiums, sports halls and indoor tennis courts as well as other facilities where the luminaire needs to be shockproof and not break when hit by a ball. The luminaire is equipped with a protection grid (stainless steel, 30x30 mm) that protects the light source from breakage. For maximum lifetime, Game can be equipped with three extremely long-lasting Valtavalo G-series LED tubes (G5 LED tube up to 35W), taking into account CCT, optics and other requirements. Upon request it can also be supplied with dimmable SwitchDim or DALI system.

Model	Game 150 cm
Number of LED tubes	3
Dimensions (length x width x height, mm)	1531 x 251 x 65
Weight, kg	7
Socket type	T8 / G13
Input voltage	230 V AC, 50/60 Hz
Material	Steel body in pre-painted white, stainless steel protection grid, 30x30 mm
Installation	Directly onto wall or ceiling, suspension rail
Installation height	4–10 m
Connection	Through-wired version available upon request: 5 x 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> .
Recommended light source	G5 150 cm (performance values below, see pages 28-33 for more information on light sources)
Warranty	10 years for luminaire, light sources 5–7 years depending on the model
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI-control
Accessories	Motion sensor (micro wave), SwitchDim, DALI

Recommended light source: Valtavalo G5	VV22E150G5-850
Length (cm)	150
Colour temperature (K)	5000
Optics	Semiopal
Total power (W)	66
Rated luminous flux in total (lm)	10 150



# Mandy

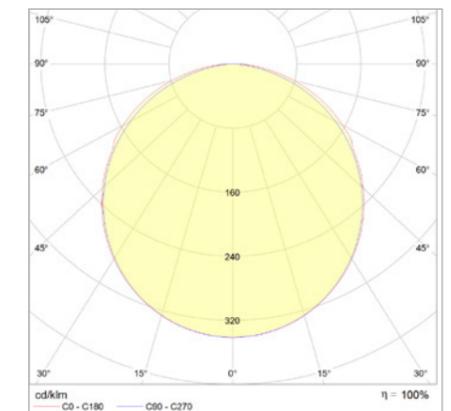
## Linear luminaire for office and kitchen workstations



Usual sites for the Mandy model include office and kitchen workstations where a slim luminaire is required. The luminaire can be installed on ceilings and walls. The socket and the switch available as accessories make the Mandy luminaire a versatile option. The default colour is white, but it is also available in grey and black. The luminaire's replaceable light source is an EN 62776 standardised LED tube that can be replaced when necessary without a need to consider the manufacturer. We recommend Valtavalo G5 LED tubes as light sources. The luminaire can also be delivered with a dimmable LED tube and control unit suitable for SwitchDim or DALI solutions.

Model	Mandy 60 cm	Mandy 120 cm	Mandy 150 cm
Number of LED tubes	1	1	1
Dimensions (length x width x height, mm) *Dimensions with SwitchDim or DALI control devices	788 x 66 x 45 *not available	1398 x 66 x 45 *1424 x 66 x 45	1698 x 66 x 45 *1724 x 66 x 45
Weight, kg (without light sources) *Weight with Switchdim or DALI control devices	1,0 *not available	2,0 *2,1	2,4 *2,5
Socket type	T8 / G13		
Input voltage	230 V AC, 50/60 Hz		
Protection	IP40		
Material	White steel sheet, opal cover		
Colour options	Standard colour is white, also available in grey and black		
Installation	Directly onto wall or ceiling, suspension rail		
Installation height	max 3 m		
Connection	Through-wired version available upon request. 5-pole screwless terminal block 1,5 mm <sup>2</sup> or 2,5 mm <sup>2</sup> . Cable entry via knockouts in the end of the luminaire (2 pcs.) and in the middle (2 pcs.)		
Recommendable light source	G5 LED tube (performance values below, see pages 28-33 for more information on light sources)		
Warranty	5 years for luminaire, 5–7 years for light source depending on the model		
Lighting control	Applicable to dimming with Trailing Edge, SwitchDim or DALI control		
Accessories	Motion sensor (micro wave/PIR), SwitchDim, DALI, socket (one-piece or two-piece), separate switch		

Recommended light source: Valtavalo G5	VV22E150G5-840
Length (cm)	150
Optics	Semiopal
Power (W)	1 x 22
Colour temperature (K)	4000
Rated luminous flux (lm)	2550



# LIGHT SOURCES

A luminaire with a replaceable light source is an ecological and high-quality solution that saves money and nature. Maintenance and upkeep costs are considerably reduced since lighting can easily be updated by replacing the light source in the luminaire.

## G-SERIES LED TUBE

Made of anodised aluminium end caps of PC-plastic

**Ideal for operating hours up to 24 hrs a day**  
A long service life ensure significant savings in maintenance costs, especially in hard-to-access areas.

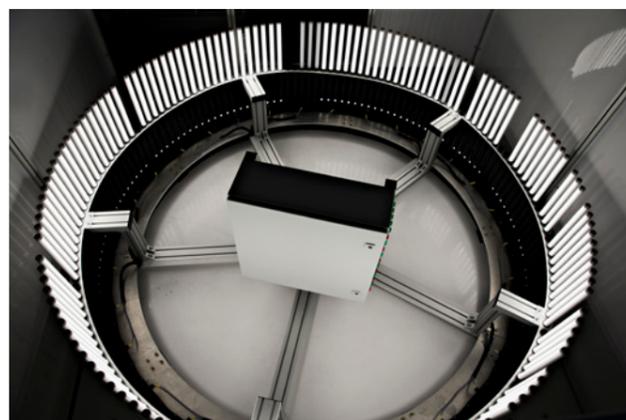
**For demanding conditions and high temperatures**  
Wide operating temperature range -40°C - +50°C (High Temp up to +70°C) and high vibration tolerance.

**High ceilings**  
The most luminous replaceable LED light source: 180 lm/W and 5600 lm

**Flicker-free light**  
Non-flickering, excellent quality light with a flicker percentage of less than 1%.  
The flicker percentage of a typical LED tube is approx. 30%.

**Several dimming options to choose from**  
Trailing edge dimmer, SwitchDim or Dali can be used with G5 Dimmable LED tube

**Closed fixtures**  
\*In a closed fixture, the temperature is usually about 10 degrees higher than the surroundings. Therefore, we recommend to use the G-series LED tubes in this type of installation to ensure the longest possible lifetime.



At the end of a fully automated production process each LED tube is carefully tested ensuring high quality of the products.

## E-SERIES LED TUBE

Made of glass, end caps of fireproof polycarbonate  
Traditional glass frame with shatterproof plastic coating

**Ideal for operating hours up to 8-10 hrs a day**  
Short payback period

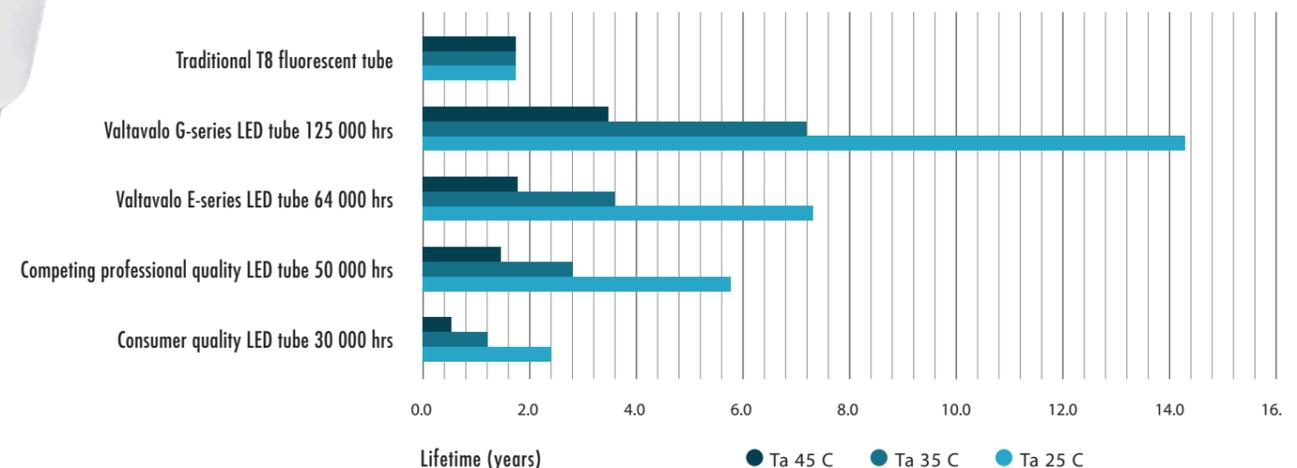
**Cost-effective solution for general lighting in all kinds of premises**  
for example, offices, business premises and other public buildings. Thanks to the low energy consumption and the minimum maintenance costs, operating costs are also low.

**Open fixtures**

**Quick and simple upgrade**  
of the existing lighting system to a new without having to replace the entire luminaires.



### LIFETIME OF A LIGHT SOURCE WITH 24/7 OPERATION



\*The graph is based on the Arrhenius equation commonly used in reliability analysis for electronics.

# G-series light sources

With their long lifetime and high quality, the aluminium-framed G-series light sources are suitable for a wide range of installations, also in challenging conditions. They offer significant savings in maintenance and upkeep costs, especially in difficult-to-access areas. The light sources are manufactured in Valtavalo's own factory in Kajaani according to standard EN62776.

## G5 and G4 light sources

The standard models of G-series G5 and G4 LED tubes are suitable for use in spaces where the lights are on for long periods of time - up to 24/7. They provide flicker-free, high quality light with a flicker percentage of around 1%. It has been found that flicker-free light plays a significant role in improving wellbeing at work as well as in preventing occupational accidents particularly in industrial fields.

MODEL G5   4000K	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV22E150G5-840	Semiopal	150 cm	22 W	445 g	3700 lm	C (A++)
VV18E120G5-840	Semiopal	120 cm	18 W	385 g	3000 lm	C (A++)

MODEL G5   5000K	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV22E150G5-850	Semiopal	150 cm	22 W	445 g	3800 lm	C (A++)
VV18E120G5-850	Semiopal	120 cm	18 W	385 g	3100 lm	C (A++)

MODEL G4   4000K	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV24E150G4-840	Semiopal	150 cm	24 W	445 g	3200 lm	E (A++)
VV19E120G4-840	Semiopal	120 cm	19 W	385 g	2550 lm	E (A++)
VV15E090G4-840	Semiopal	90 cm	15 W	300 g	2000 lm	E (A++)
VV10E060G4-840	Semiopal	60 cm	10 W	225 g	1350 lm	D (A++)
VV07E045G4-840	Semiopal	45 cm	7 W	190 g	950 lm	D (A++)

MODEL G5 AND G4			
Input voltage	230 V AC, 50/60 Hz	Socket type	T8 / G13
THD	<20%	Power factor	0.95
Colour rendering index (CRI)	Ra > 80	Colour consistency	MacAdam 3 SDCM
Beam angle	120°	Average lifespan	125 000 hours (L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 25°C)
Operating temperature	-40°C – +50°C	Operating humidity	< 90 %
Protection class	IP20	Warranty	7 years
Flickering percentage	1%	Material	Anodised aluminium, PC-plastic, free of glue and silicone

## G5 High Temp

Ability to operate under wide temperature range (up to +70 °C), high tolerance to vibration as well as long service life make G5 High Temp an excellent choice for demanding industrial applications. Typical installation sites include bakeries and challenging industrial environments.

MODEL	Colour temperature	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV22E150HT-840	4000 K	Semiopal	150 cm	22 W	445 g	3700 lm	C (A++)
VV18E120HT-840	4000 K	Semiopal	120 cm	18 W	385 g	3000 lm	C (A++)
VV22E150HT-850	5000 K	Semiopal	150 cm	22 W	445 g	3800 lm	C (A++)
VV18E120HT-850	5000 K	Semiopal	120 cm	18 W	385 g	3100 lm	C (A++)

Input voltage	230 V AC, 50/60 Hz	Socket type	T8 / G13
THD	<20%	Power factor	0.95
Colour rendering index (CRI)	Ra > 80	Colour consistency	MacAdam 3 SDCM
Beam angle	120°	Protection class	IP20
Operating temperature	-40°C – +70°C	Average lifespan L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 25°C	125 000 hours
Operating humidity	< 90 %	Average lifespan L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 60°C	60 000 hours
Warranty	5 years	Flickering percentage	1%
Material	Anodised aluminium, PC-plastic, free of glue and silicone		

## G5 High Power

With a luminous flux of up to 5,600 lm, Valtavalo G5 High Power is the best choice for all spaces where there is a requirement for a large amount of high-quality light. Example applications include industrial premises with high ceilings (10-15 m) or for finely detailed work.

MODEL	Colour temperature	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV35E150HP-840	4000 K	Semiopal	150 cm	35 W	445 g	5300 lm	D (A++)
VV35E150HP-850	5000 K	Semiopal	150 cm	35 W	445 g	5400 lm	D (A++)

Input voltage	230 V AC, 50/60 Hz	Socket type	T8 / G13
THD	<20%	Power factor	0.95
Colour rendering index (CRI)	Ra > 80	Colour consistency	MacAdam 3 SDCM
Beam angle	120°	Average lifespan	83 000 hours (L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 25°C)
Operating temperature	-40°C – +50°C	Operating humidity	< 90 %
Protection class	IP20	Warranty	5 years
Flickering percentage	1%	Material	Anodised aluminium, PC-plastic, free of glue and silicone

## G5 Dimmable

When conventional lighting control is not enough or when there is a need for several different lighting levels in the same space, the G5 Dimmable LED tube is an ideal option. It can be integrated into a system with compatible LED dimmers and SwitchDim or DALI control devices.

MODEL	Colour temperature	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV23E150G5D-840	4000 K	Opal	150 cm	23 W	445 g	3700 lm	C (A++)
VV19E120G5D-840	4000 K	Opal	120 cm	19 W	385 g	3000 lm	D (A++)
VV23E150G5D-850	5000 K	Opal	150 cm	23 W	445 g	3800 lm	C (A++)
VV19E120G5D-850	5000 K	Opal	120 cm	19 W	385 g	3100 lm	C (A++)

Input voltage	230 V AC, 50/60 Hz	Socket type	T8 / G13
THD	<25%	Power factor	0.90
Colour rendering index (CRI)	Ra > 80	Colour consistency	MacAdam 3 SDCM
Beam angle	120°	Average lifespan	125 000 hours (L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 25°C)
Operating temperature	-40°C – +50°C	Operating humidity	< 90 %
Protection class	IP20	Warranty	5 years
Material	Anodised aluminium, PC-plastic, free of glue and silicone.		

## G5 Narrow Beam

Narrow Beam LED tube with 45° light distribution is designed especially for high spaces (8-13 m), and its narrow light distribution makes it possible to use solutions with replaceable light sources in even higher spaces than before.

MODEL	Colour temperature	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV35NB150G5-840	4000 K	clear	150 cm	35 W	445 g	5500 lm	B (A++)
VV35NB150G5-850	5000 K	clear	150 cm	35 W	445 g	5600 lm	B (A++)

Input voltage	230 V AC, 50/60 Hz	Socket type	T8 / G13
THD	<20%	Power factor	0.95
Colour rendering index (CRI)	Ra > 80	Colour consistency	MacAdam 3 SDCM
Beam angle	45°	Average lifespan	83 000 hours (L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 25°C)
Operating temperature	-40°C – +50°C	Operating humidity	< 90 %
Protection class	IP20	Warranty	5 years
Flickering percentage	1%	Material	Anodised aluminium, PC-plastic, free of glue and silicone.

## E-series light sources

E-series light sources are ideal for operating hours up to 8-10 hrs a day. It's 64,000 hr lifetime and competitive pricing ensure short return on investment. It offers a cost-effective solution for general lighting, for example, in offices and other standard business facilities. E3 LED tubes are designed and manufactured in Finland in Valtavalo's own factory.



### E3+ light sources

The E3+ LED tube offers a traditional glass frame, familiar from the product segment, with shatterproof plastic coating. Its shatterproof glass frame also makes it ideal in locations where the breakage of a light cannot interfere with the use of space, such as food production facilities.

MODEL	Colour temperature	Optics	Length	Power	Weight	Rated luminous flux	Energy efficiency (old rating)
VV24F150E3P-840	4000 K	Opal	150 cm	24 W	250 g	3600 lm	D (A++)
VV19F120E3P-840	4000 K	Opal	120 cm	19 W	210 g	2800 lm	D (A++)
VV24F150E3P-850	5000 K	Opal	150 cm	24 W	250 g	3700 lm	D (A++)
VV19F120E3P-850	5000 K	Opal	120 cm	19 W	210 g	2900 lm	D (A++)

Input voltage	230 V AC, 50/60 Hz	Socket type	T8 / G13
THD	<25%	Power factor	0.93
Colour rendering index (CRI)	Ra > 80	Colour consistency	MacAdam 3 SDCM
Beam angle	200°	Average lifespan	64 000 hours (L <sub>70</sub> B <sub>50</sub> / T <sub>a</sub> 25°C)
Operating temperature	-20°C – +40°C	Operating humidity	< 90 %
Protection class	IP20	Warranty	5 years
Material	Plastic coated glass, end caps of fire resistant PC-plastic		

## New energy efficiency classes

The new energy labelling regulations for light sources has come into effect on 1 September 2021. New energy efficiency classes are based on more easily readable lm/W -efficiency instead of the old Energy Efficiency Index. Energy classes have been rescaled totally: for example, earlier best A++ has been categorized to E class and A+ to worst G class.

Energy efficiency class	Lighting efficacy lm/W
A	> 210
B	185 - 210
C	160 - 184
D	135 - 159
E	110 - 134
F	85 - 109
G	< 85

# Product availability and accessories

Luminaires can be found at the top of the table. The columns in left shows light source models and colour temperature options. Luminaire accessories can be found at the bottom. The table can also be read from the bottom up, for example if you need a DALI luminaire, it is a good idea to go to the accessories section to see which luminaire models DALI control is available for. The table shows luminous flux values for a 4000K opal product.

Replaceable light source code XX 30=3000K 40=4000K 50=5000K 65=6500K	Colour temperature (CCT)	Uniga								Prima plus				Prima trio	Teva slim				Game	Beat				Ancora				Anticor		Mirko		Mandy													
		regular				direct/ indirect	recessed																			regular	direct/ in-direct																		
		UNIGA 2x150 A2580UNIGA-TW-2X5P	UNIGA 1x150 A1580UNIGA-TW-2X5P	UNIGA 2x120 A2360UNIGA-TW-2X5P	UNIGA 1x120 A1360UNIGA-TW-2X5P	UNIGA suora/episauara 3x150 A3580UNIGA-TW/DI/IN	UNIGA suora/episauara 3x120 A3360UNIGA-TW/DI/IN	UNIGA Recessed 2x120 A2360M91TW-A	UNIGA Recessed 1x120 A1360M91TW-A	UNIGA Recessed 4x60 A4180M91TW-A	UNIGA Recessed 2x60 A2180M91TW-A	Prima plus 1 x 60 cm A1180PRL-LED-PC2X5P-KOV	Prima plus 1 x 120 cm A1360PRL-LED-PC2X5P-KOV	Prima plus 1 x 150 cm A1580PRL-LED-PC2X5P-KOV	Prima plus 2 x 60 cm A2180PRL-LED-PC2X5P-KOV	Prima plus 2 x 120 cm A2360PRL-LED-PC2X5P-KOV	Prima plus 2 x 150 cm A2580PRL-LED-PC2X5P-KOV	Prima trio 3 x 150 cm A3580PC-LED-2X5PK	Teva slim 1 x 120 cm A1360TEVA3-LED2X5P	Teva slim 1 x 150 cm A1580TEVA3-LED2X5P	Teva slim 2 x 120 cm A2360ORTE-FIN-LED2X5P	Teva slim 2 x 150 cm A2580ORTE-FIN-LED2X5P	Teva slim 3 x 120 cm A3360ORTE-FIN-LED2X5P	Teva slim 3 x 150 cm A3580ORTE-FIN-LED2X5P	Game 3 x 150 cm A3580M80-GAME2-2X5P/VUT	Beat 1 x 120 cm A1360BEATA-OP	Beat 2 x 120 cm A2360BEATA-OP	Beat 1 x 150 cm A1580BEATA-OP	Beat 2 x 150 cm A2580BEATA-OP	Ancora 1 x 60 cm A1180AM712X5P	Ancora 2 x 60 cm A2180AM712X5P	Ancora 1 x 120 cm A1360AM712X5P	Ancora 2 x 120 cm A2360AM712X5P	Ancora 1 x 150 cm A1580AM712X5P	Ancora 2 x 150 cm A2580AM712X5P	Anticor 2 x 120 cm A2360AN2X5P	Anticor 2 x 150 cm A2580AN2X5P	Mirko 1x120 cm A1360MIRKO1-2x5P	Mirko 1x150 cm A1580MIRKO1-2x5P	Mirko suora/episauara 2x150 cm A2580MIRKO1-OP-DIN	Mandy 1x 60 cm A1180 Mandy	Mandy 1x 120 cm A1360Mandy	Mandy 1x 150 cm A1580Mandy		
<b>G5-series, rated luminous flux for 4000 K opal</b>																																													
Regular	W18X120G5-8XX (120 cm)	✓	✓			5350	2600		8600	5200	2500			2850		5700			3000	5900	8750				2750	5200				2800	5500			4750	2550			2050							
Regular	W22X150G5-8XX (150 cm)	✓	✓			6600	3200		10600				3500		7050	10000			3700	7200	10750			9550			3400	6300				3450	6800			5850		3100	5600			2550			
High Temp	W18X120HT-8XX (120 cm)	✓	✓											2850		5700			3000	5900	8750									2800	5500			4750											
High Temp	W22X150HT-8XX (150 cm)	✓	✓										3500		7050	10000			3700	7200	10750												3450	6800			5850								
Dimmable	W19X120G5D-8XX (120 cm)	✓	✓			5350	2600		8600	5200	2500			2850		5700			3000	5900	8750					5200				2800	5500			4750	2500					2050					
Dimmable	W23X150G5D-8XX (150 cm)	✓	✓			6600	3200		10600				3500		7050	10000			3700	7200	10750			9550								3450	6800			5850		3100	5600			2550			
High Power	W35X150HP-8XX (150 cm)	✓	✓			9450	4600		15150				5050		10050	14300			5300	10400	15400			13650			4900	9200				4950	9850			8400		4350	7950			3650			
Narrow Beam	W35NB150G5-8XX (150 cm)	✓	✓																5500	11000	16500																								
<b>G4-series, rated luminous flux for 4000 K opal</b>																																													
	WV07X045G4-8XX (45 cm)	✓																																											
	WV10X060G4-8XX (60 cm)	✓											4550	2250	1300															1250	2500											900			
	WV15X090G4-8XX (90 cm)	✓																																											
	WV19X120G4-8XX (120 cm)	✓	✓			4550	2200		7300	4400	2150			2450		4900			2550	4950	7400					2350	4400			2350	4700			4050	2150							1750			
	WV24X150G4-8XX (150 cm)	✓	✓	✓		5700	2750		9150					3050		6100			3200	6200	9300			8250			2950	5550					3050	5900			5100		2700	4900			2200		
<b>E3 plus -series, rated luminous flux for 4000 K</b>																																													
	WV19F120E3P-8XX (120 cm)	✓	✓			4300	2100		6450	4300	2100			2450		4650			2900	5200	7650					2500	4350			2450	4600			3550								1500			
	WV24F150E3P-8XX (150 cm)	✓	✓			5550	2700		8300				3100		6000				3600	6650	9800							3200	5600					3150	5950			4550				1900			
<b>E3-series, rated luminous flux for 4000 K</b>																																													
	WV10F060E3-8XX (60 cm)	✓											4000	2000	1100														1150	2150												700			
	WV20F120E3-8XX (120 cm)	✓	✓			4100	1900		6100	4050	2000			2300		4400			2650	4900	7200					2300	4100			2300	4350			3350								1400			
	WV25F150E3-8XX (150 cm)	✓	✓	✓		5100	2500		7600					2850		5500			3300	6100	9000						2950	5150					2900	5450			4150					1750			
<b>Available accessories</b>																																													
	Motion sensor (microwave) on-off-control																								✓		✓																		
	*Stand-Alone DALI-control with motion sensor (microwave)																																												
	Motion sensor (infrared) on-off-control	✓	✓	✓	✓	✓	✓																																						
	Own switch																																												
	Pull cord switch	✓	✓	✓	✓	✓	✓																																						
	Suspension cable set	✓	✓	✓	✓																																								
	Emergency lighting unit, 1h	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Socket (Schuko)																																												
	*DALI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	*SwitchDim	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Cable entry (1,5 mm <sup>2</sup> / 2,5 mm <sup>2</sup> )	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\* NOTE! For Stand-Alone DALI, DALI or SwitchDim control, G5 dimmable LED tube must always be used as the light source.



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