



# VALTAVALO® E3+ LED TUBE

TOP QUALITY LED LIGHTING SOLUTIONS FOR PROFESSIONAL APPLICATIONS

LED tube with traditional glass frame and shatterproof plastic coating

## Replaceable LED light source with a shatterproof glass body

The E3+ LED tube, the latest addition to the Valtavalo® E series, offers a traditional glass frame, familiar from the product segment, with shatterproof plastic coating. It has been upgraded with more powerful LEDs, providing an output of up to 3,700 lm. It offers a top performance and cost-effective solution for applications in general operating conditions, for example, in offices and other standard business facilities. 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. Due to its best-in-class 64,000 hr lifetime and competitive pricing it provides great value for money and ensures short return on investment.



Valtavalo E3+ generates uniform, soft, comfortable light and imitates perfectly the conventional fluorescent tube.



valtavalo

### WHY TO CHOOSE E3+

#### PREMIUM QUALITY

- 64,000 hrs lifetime
- Fully automated production
- 5-year warranty

#### COST-EFFICIENCY

- Quick and easy to instal
- Significant energy savings
- Short payback period

#### SAFE LIGHTING

- Complies with safety standard IEC62776
- Shatterproof coating
- End caps of fire-resistant PC-plastic

### HIGH FINNISH QUALITY

E3+ LED tubes are manufactured in a fully automated production line in Valtavalo's own factory in Finland. In order to ensure uniform quality and reliability, each LED tube goes through an automatic and multi-stage electric and light property test. Thus, our clients can be assured of the excellence of the products. E3+ LED tubes are made according to the international LED tube standard EN62776, which ensures the upgrade to the latest lighting technology simply by replacing the old tubes with new tubes without having to replace the entire luminaires. Quick, easy and cost-efficient!



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MADE IN FINLAND



**FIND THE RIGHT PRODUCT FOR YOUR PURPOSE**

**Valtavallo E3/E3+ LED tubes**

- Lifetime of 64,000 hrs
- Glass tube with shatterproof coating (E3+)
- Ideal for general lighting conditions with operating hours of 8-10 hrs per day and for open fixtures

**Valtavallo G5 LED tubes**

- Lifetime of 125,000 hrs
- Up to 180 lm/W
- Ideal for operating hours up to 24 hrs per day, closed fixtures, high ceilings

**Valtavallo G5 High Power**

- Lumen output up to 5900 lm
- Lifetime of 83,000 hrs
- Especially for high ceilings and for spaces where there is a need for a lot of high quality light

**Valtavallo G5 High Temp**

- Wide operating temperature range (up to +70 °C)
- Especially for demanding conditions
- 5 year warranty even at high temperatures

**Valtavallo G5 Dimmable**

- Lumen output up to 4000 lm
- When conventional lighting control is not enough
- Compatible with trailing Edge dimmers, SwitchDim or DALI control gear

**COMPREHENSIVE TESTING GUARANTEES QUALITY**

Each LED tube is subjected to rigorous automated testing of its luminous intensity, colour temperature, colour rendering, spectrum, power factor, harmonic distortion and power consumption. The test data on every item can be traced with the help of the unique serial number on the product.



**QUICK, SIMPLE AND SAFE REPLACEMENT OF FLUORESCENT TUBES**

Retrofit directly into G13 fixtures with magnetic ballast or fixtures without ballast and with direct contact to the mains. Rebuild and new installations with Valtavallo LED tube fixtures.



**SEGMENT-LEADING QUALITY**

Uniform premium quality and reliability are ensured by automatic manufacturing and comprehensive testing during the manufacturing process. The Valtavallo manufacturing process is certified according to the quality management standard ISO 9001.



**LONG LIFESPAN**

Lifetime of E3+ is 64,000 hours ( $L_{70B_{50}} / T_a 25 °C$ ) - longer than of other competing LED tubes in the same product segment and compatible with LED tube standard EN62776. It is also 5 times longer than that of a conventional fluorescent tube. Valtavallo E3+ LED tubes come with a 5-year warranty.

**EXCELLENT LIGHT QUALITY**

E3+ LED tube produces uniform white light with minimum glare. This uniform, soft and comfortable light is suitable for all environments where people have to be able to see well.

**ENVIRONMENTALLY FRIENDLY**

E3+ LED tubes do not contain mercury, lead or any other toxins. Manufacturing in an energy-efficient production plant in Finland reduces the carbon footprint of our environmentally friendly products. Valtavallo's operations are certified according to the environmental management system standard ISO 14001.

**SAFER LIGHTING**

Valtavallo E3+ complies with the safety standard for double-capped LED lamps IEC62776, which safeguards that the change from fluorescent tube to LED tube is carried out safely. Safe installation is ensured with one side driver (end with nameplate) and one side short-cut with a passive fuse.

**MADE IN FINLAND**

Manufactured in a fully automated production line in Valtavallo's own production plant in Kajaani, Finland.

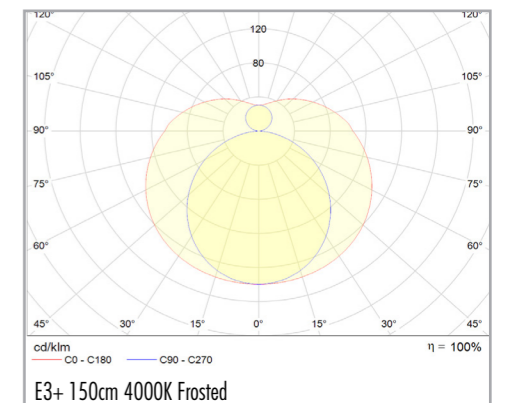


**GREAT VALUE FOR MONEY**

A cost-effective solution for lighting in general operating conditions: reduced operational costs due to low energy consumption and low maintenance costs. A quick and easy way to upgrade your existing lighting system to the latest LED technology without having to replace entire luminaires.



**LIGHT DISTRIBUTION**



- Beam angle of 200°
- Low glare
- Uniform white light



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## TECHNICAL SPECIFICATIONS FOR 5000K AND 4000K

MALLI   FROSTED	VV24F150E3P-850	VV24F150E3P-840	VV19F120E3P-850	VV19F120E3P-840
Length	150 cm	150 cm	120 cm	120 cm
Power	24 W	24 W	19 W	19 W
Colour temperature	5000 K	4000 K	5000 K	4000 K
Weight	250 g	250 g	210 g	210 g
Energy efficiency class	A++	A++	A++	A++
Rated luminous flux	3700 lm	3600 lm	2900 lm	2800 lm
Socket Type	G13			
Input Voltage	230 V AC, 50/60 Hz; 230 V DC (0 Hz)			
Power Factor	0.93			
Harmonic Distortion (THD)	25%			
Colour Rendering Index (CRI)	Ra > 80			
Colour Consistency	MacAdam 3 SDCM			
Beam Angle	200°			
Average Lifespan L <sub>70B50</sub> / T <sub>a</sub> 25 °C	64,000 hours			
Warranty	Unlimited 5-year warranty up to +30 °C			
Operating Temperature	-20 °C – +40 °C			
Operating Humidity	< 90%			
Protection Class	IP 20			
Housing & Cover Material	Plastic coated glass, end caps of fire resistant PC-plastic			
Markings	CE			
Additional info	Please contact Valtavallo sales or your local distributor for customised solutions.			



Valtavallo Ltd is a Finnish company, specialising in ultra-long lifetime LED-lighting solutions with replaceable light sources. In-house R&D and manufacturing in Finland guarantees the best possible quality of the products. Lifetime value and exceptional quality provide a leading cost of ownership lighting solutions to quality-conscious customers.



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