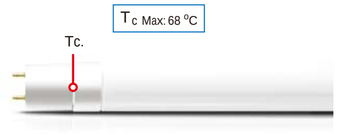
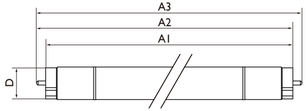
Temperature

ESSENTIAL LEDtube's excellent thermal design ensures low temperature during operating, which brings reliable and stable product performance throughout life time.

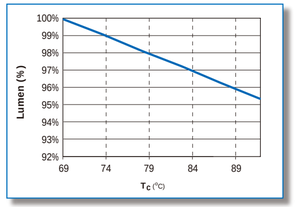




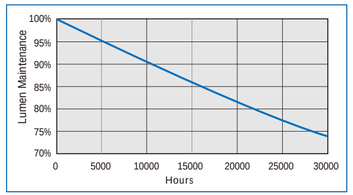
Dimensions (mm)

Product	A1	A2	A3	D
600mm	588.5	595.5	602.5	27.5
1200mm	1198	1205	1212	27.5

Operating temperature	T operating	min -30°C	max +45°C
Storage temperature	T storage	min -40°C	max +65°C
Maximum surface temperature of tube at Tamb.=25°C	T surface		+68°C



Lifetime and Lumen Maintenance



PHILIPS ESSENTIAL LEDtube has a lifetime of 25,000 hours, defined as the number of hours when 50% of a large group of identical lamps below 70% of its initial lumens.

Approbation & Certificates

Philips Essential LEDtube is designed by strictly following applicable legislation and international standard. The product complies with **CE, KEMA, TISI, RCM, RoHS** and **REACH**.

Technical specification

Product Description	Wattage	Equivalent Fluorescent Wattage	Voltage	Cap	Length	Beam angle	Lifetime	Lumen output	Color Temp	CRI *
	(W)	(W)	(V)		(mm)		(hrs)	(lm)	(K)	(Typical)
ESSENTIAL LEDtube 1200mm 20W840 T8	20	36	220-240	G13	1200	165	25000	1600	4000	80
ESSENTIAL LEDtube 1200mm 20W865 T8	20	36	220-240	G13	1200	165	25000	1600	6500	80
ESSENTIAL LEDtube 600mm 10W840 T8	10	18	220-240	G13	600	165	25000	800	4000	80
ESSENTIAL LEDtube 600mm 10W865 T8	10	18	220-240	G13	600	165	25000	800	6500	80

* minimum is 75

Ordering Information

Product Description	12NC	Pieces per box	Box Length	Box Width	Box Height	Lamp Weight
			(mm)	(mm)	(mm)	(gram)
ESSENTIAL LEDtube 1200mm 20W 4000K T8	929000296608	10	123	17	8.5	320
ESSENTIAL LEDtube 1200mm 20W 6500K T8	929000296708	10	123	17	8.5	320
ESSENTIAL LEDtube 600mm 10W 4000K T8	929000296808	10	63	17	8.5	170
ESSENTIAL LEDtube 600mm 10W 6500K T8	929000296908	10	63	17	8.5	170

Quick Installation Guide

Please take the time to read this quick installation guide. Philips Lighting does not accept liability for any damages for installations not performed according to this guide or not performed by a professional electrician.

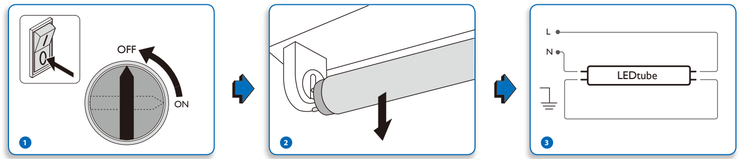
Installation Warning

- Only for installation direct after mains input (220-240V AC). Cannot work with fluorescent ballast, neither Electro Magnetic(EM) nor High Frequency electronic(HF) ballast.
- Product is not dimmable
- Always switch off the power supply before commencing work
- Do not change the structure or any components of the product

Application Notes

- Operation temperature range is between -30°C and +45°C ambience.
- Only to apply in dry indoor usage and environments.
- Not intended for use with emergency light fixtures or exit light.
- For use in fixtures which consist of IEC compliant G13 bi-pin lamp holders which can support 500 gram.

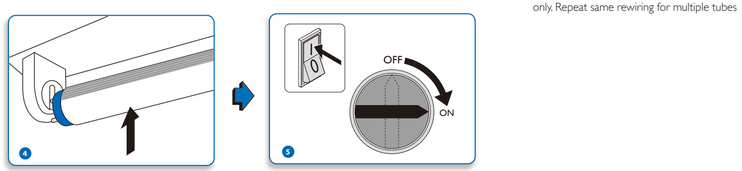
Existing Fluorescent Luminaires



Turn Mains Off

Remove all existing FLUORESCENT TUBES from luminaire

Bypass existing BALLAST and rewire. Diagiam shown on the above is for one tube only. Repeat same rewiring for multiple tubes



Install Essential LEDtube

Turn Mains On

New built luminaires

Wire according to the number of tubes per luminaire.

Diagram A

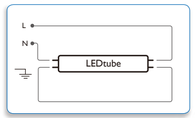
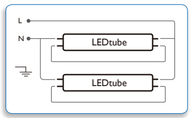


Diagram B



Number of tube	Wire according to diagram
1	A
2	B
3	A+B
4	B+B

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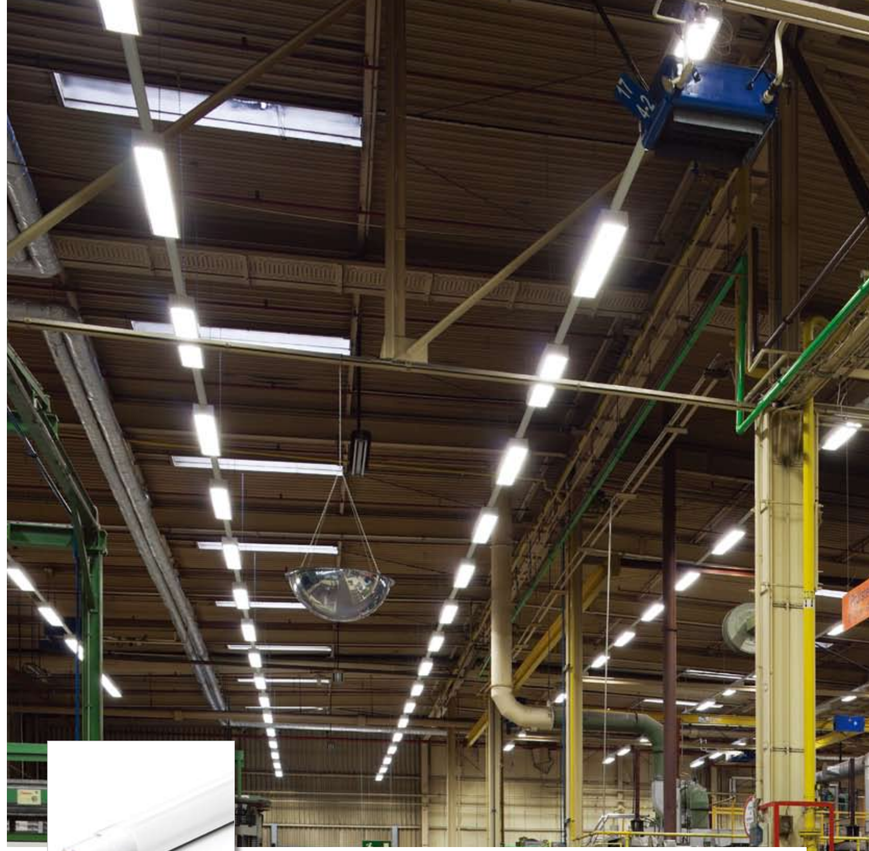
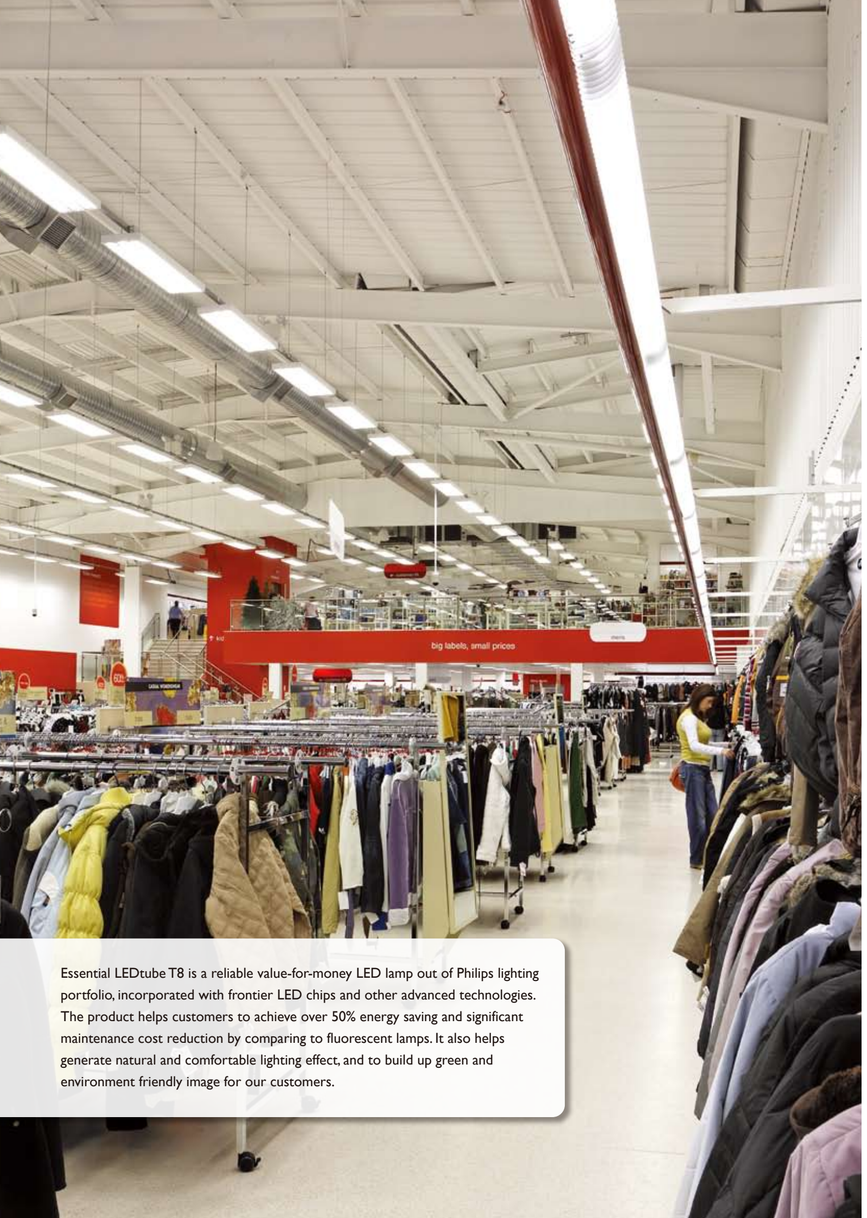
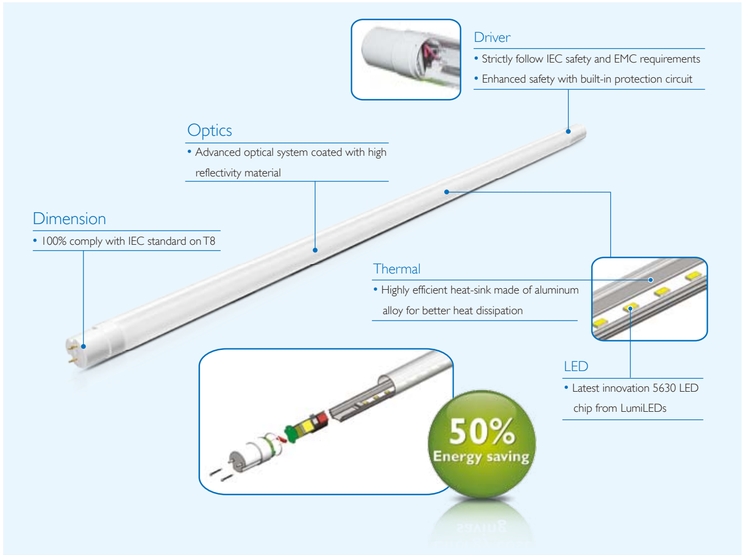


Philips Essential LEDtube T8

PHILIPS
sense and simplicity



Essential LEDtube T8 is a reliable value-for-money LED lamp out of Philips lighting portfolio, incorporated with frontier LED chips and other advanced technologies. The product helps customers to achieve over 50% energy saving and significant maintenance cost reduction by comparing to fluorescent lamps. It also helps generate natural and comfortable lighting effect, and to build up green and environment friendly image for our customers.



Product Features

Highly Reliable
- LumiLEDs 5630 LED package inside, together with most reliable electronic components and the other materials to ensure good performance during -30 °C to 45 °C ambient temperature
- Trustable life time claim
- Strictly controlled THD and EMI, ensuring good performance under complex application conditions

Highly Comfortable
- CRI 80, presenting wonderful brand image
- Advanced optical PC material, excellent and smooth light output
- High reflectivity material, further improving efficiency

Highly Energy Efficient
- Low energy consumption, over 50% energy saving*
- 50,000 switching cycles, working together perfectly with compatible sensor system which brings further energy saving

Highly Safe
- Protection circuit inside ensuring people's safety in case of mis-use, complying with IEC safety requirements
- Pass 4KV high-pot test, insulation & safety guaranteed
- Pass 2KV surge test (vs. IEC standard 500V), avoiding the damage caused by input voltage fluctuation and lightning strike

Highly Fit
- 100% comply with IEC requirement on T8 dimension, fitting into fluorescent luminaire perfectly

Highly Environmental Friendly
- No mercury and glass, no breakage and pollution risk

* Based on comparison between 20W Essential LEDtube and Philips TLD standard or super 80 36W(40-44W system power when working with Electro Magnetic Ballasts)

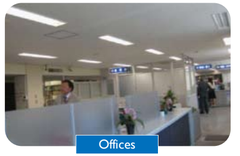
Application

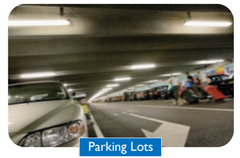

Retail


Industry


Schools


Hospitals


Offices

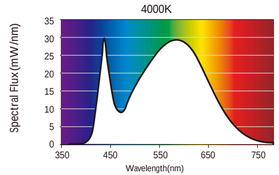

Parking Lots

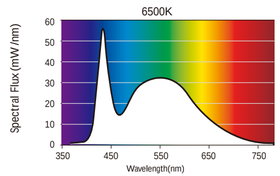

Warehouses


Public Areas

Spectral Power Distribution

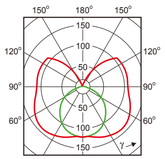
Light may be precisely characterized by giving the power of the light at each wavelength in the visible spectrum. The resulting spectralpower distribution (SPD) shows that the ESSENTIAL LEDtube contains the visible light only. No harm from UV and IR.



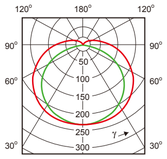


Photometric Diagrams

The Photometric diagram depicting the top down mounted lighting fixtures in a specific area and a numerical grid of the maintained lighting levels that the fixture will produce in that specific area. Pictures below show the photometric diagrams of a typical Philips Essential LEDtube's application.



Batten + 1 x Philips TL-D36W



Batten + 1 x ESSENTIAL LEDtube 20W

Axial direction

Radial direction