



Philips LEDtube T8



PHILIPS



big labels, small prices

Philips 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 55% 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

Maintain high performance

- Reliable operation between -20 °C to 45 °C ambient temperature
- Trustable claimed lifetime
- 50,000 switching cycles

Easy to experience

- Instant on, no flicker or buzz
- Advanced optical design ensures a uniform light output and superior optical efficiency

Energy Efficient

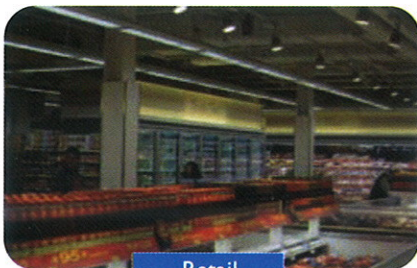
- Energy savings over 55%*

* Based on comparison between 16W Essential LEDtube standard and Philips TLD standard or super 80 36W (40-44W system power when working with Electro Magnetic Ballasts)

Safe and forget

- 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 1KV surge test (vs. IEC standard 500V), avoiding the damage caused by input voltage fluctuation and lightning strike
- 100% comply with IEC requirement on T8 dimension, fitting into fluorescent luminaire perfectly

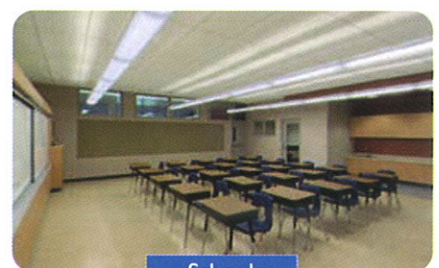
Application



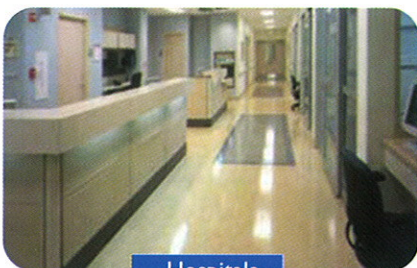
Retail



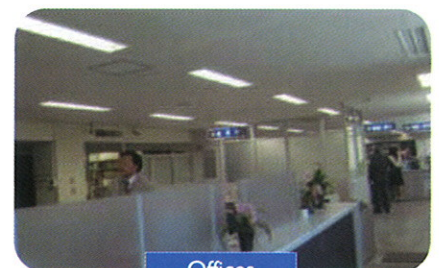
Industry



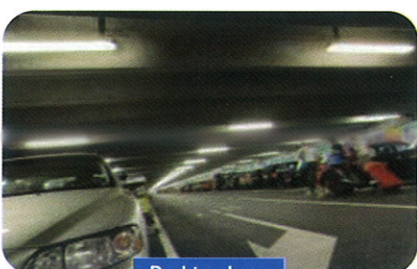
Schools



Hospitals



Offices



Parking Lots



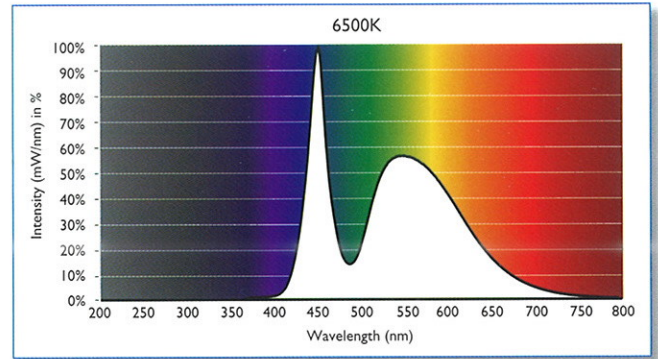
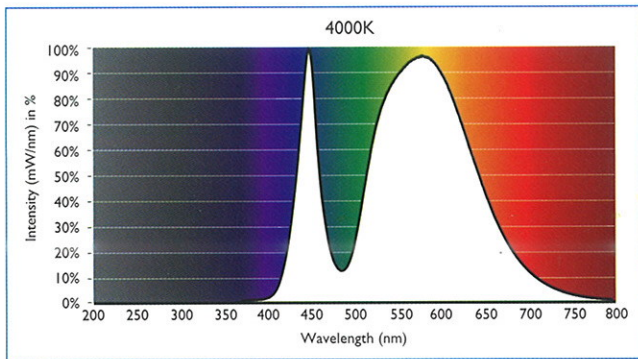
Warehouses



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 LEDtube contains the visible light only. No harm from UV and IR.

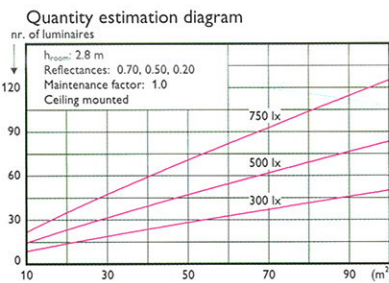
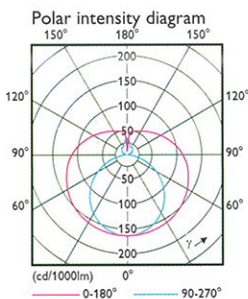


Photometric Diagrams

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 LEDtube's application.

I x TLED 8W 4000K/6500K

I x 800 lm



Utilisation factor table

Room Index k	Reflectances (%) for ceiling, walls and working plane (CIE)															
	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.10	0.10	0.10	0.10	0.10	0.00
0.60	0.39	0.37	0.37	0.36	0.35	0.28	0.25	0.21	0.23	0.19	0.15					
0.80	0.48	0.45	0.46	0.44	0.43	0.35	0.32	0.27	0.29	0.25	0.20					
1.00	0.56	0.52	0.53	0.51	0.49	0.42	0.38	0.33	0.34	0.30	0.24					
1.25	0.64	0.59	0.60	0.58	0.55	0.48	0.43	0.38	0.39	0.35	0.28					
1.50	0.70	0.63	0.65	0.63	0.60	0.53	0.48	0.43	0.43	0.39	0.31					
2.00	0.79	0.71	0.74	0.70	0.67	0.60	0.55	0.50	0.49	0.45	0.37					
2.50	0.85	0.75	0.80	0.75	0.72	0.66	0.59	0.55	0.51	0.50	0.41					
3.00	0.90	0.79	0.84	0.79	0.75	0.70	0.63	0.59	0.57	0.54	0.44					
4.00	0.97	0.84	0.90	0.84	0.79	0.75	0.68	0.64	0.61	0.58	0.48					
5.00	1.01	0.86	0.94	0.88	0.82	0.78	0.71	0.68	0.64	0.61	0.51					

Ceiling mounted

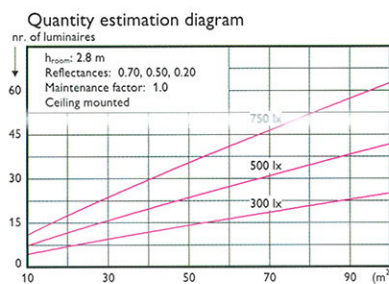
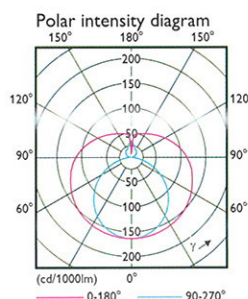
Luminance Table

Plane	0.0	15.0	30.0	45.0	60.0	75.0	90.0
Cone							
45.0	5042	4870	4859	5017	5310	5851	6764
50.0	4952	4742	4702	4837	5094	5613	6553
55.0	4885	4642	4576	4692	4993	5360	6285
60.0	4837	4560	4471	4570	4896	5290	6197
65.0	4800	4508	4392	4475	4828	5255	6153
70.0	4834	4490	4355	4429	4834	5280	6153
75.0	4904	4527	4375	4450	4846	5310	6211
80.0	5015	4608	4447	4538	4888	5383	6290
85.0	5148	4712	4549	4671	4916	5419	6359
90.0	5321	4853	4689	4858	4450	3996	510

(cd/m²)

I x TLED 16W 4000K/6500K

I x 1600 lm



Utilisation factor table

Room Index k	Reflectances (%) for ceiling, walls and working plane (CIE)															
	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.10	0.10	0.10	0.10	0.10	0.00
0.60	0.39	0.37	0.37	0.36	0.35	0.28	0.25	0.21	0.23	0.19	0.15					
0.80	0.48	0.45	0.46	0.44	0.43	0.35	0.32	0.27	0.29	0.25	0.20					
1.00	0.56	0.52	0.53	0.51	0.49	0.42	0.38	0.33	0.34	0.30	0.24					
1.25	0.64	0.58	0.60	0.58	0.55	0.48	0.43	0.38	0.39	0.35	0.28					
1.50	0.70	0.63	0.65	0.63	0.60	0.53	0.48	0.43	0.43	0.39	0.31					
2.00	0.79	0.71	0.74	0.70	0.67	0.60	0.55	0.50	0.49	0.45	0.37					
2.50	0.85	0.75	0.80	0.75	0.72	0.66	0.59	0.55	0.51	0.50	0.41					
3.00	0.90	0.79	0.84	0.79	0.75	0.70	0.63	0.59	0.57	0.54	0.44					
4.00	0.97	0.84	0.90	0.84	0.79	0.75	0.68	0.64	0.61	0.58	0.48					
5.00	1.01	0.86	0.94	0.88	0.82	0.78	0.71	0.68	0.64	0.61	0.51					

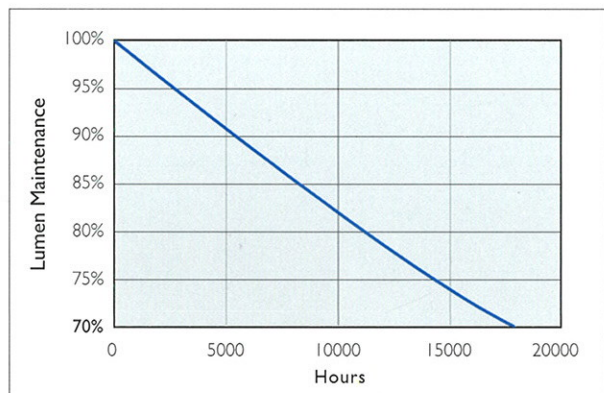
Ceiling mounted

Luminance Table

Plane	0.0	15.0	30.0	45.0	60.0	75.0	90.0
Cone							
45.0	5042	4884	4888	5042	5378	5951	6914
50.0	4952	4758	4734	4888	5170	5728	6735
55.0	4883	4658	4611	4749	4975	5402	6403
60.0	4837	4579	4509	4625	4780	5212	6187
65.0	4820	4528	4432	4540	4603	4921	5754
70.0	4834	4512	4398	4499	4456	4628	5250
75.0	4906	4552	4422	4528	4356	4328	4538
80.0	5012	4629	4493	4617	4307	4030	3451
85.0	5148	4738	4602	4763	4354	3874	1914
90.0	5318	4880	4748	4964	4619	4312	1020

(cd/m²)

Lifetime and Lumen Maintenance

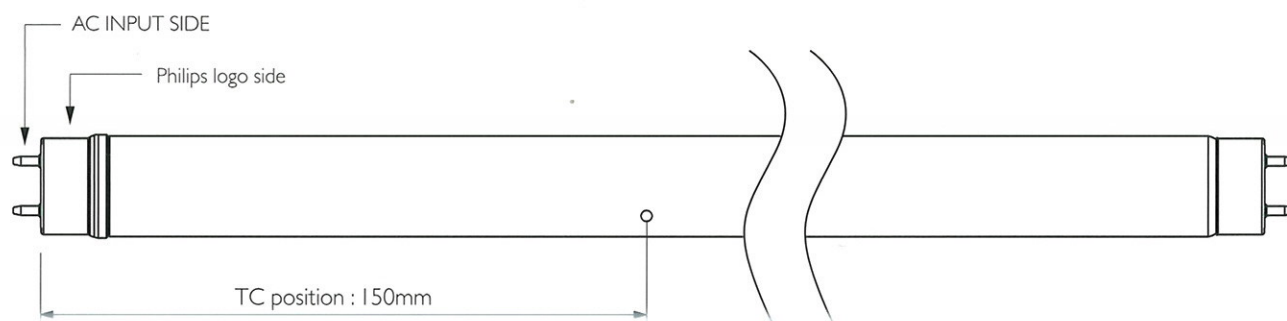
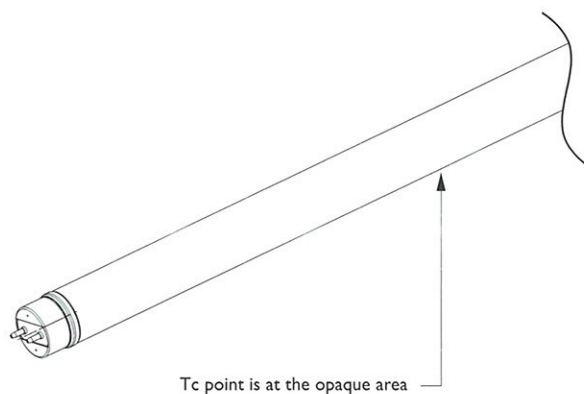
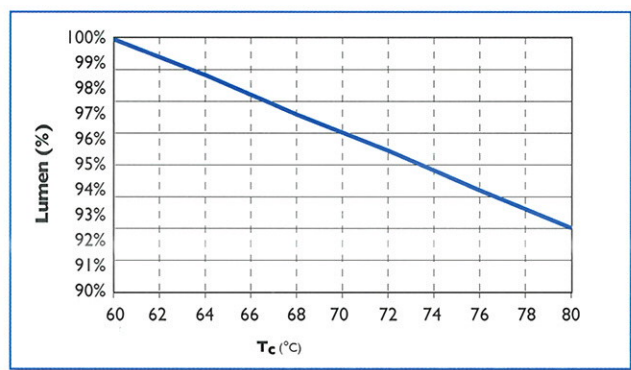


PHILIPS LEDtube has a lifetime of 15,000 hours, defined as the number of hours when 50% of a large group of identical lamps below 70% of its initial lumens.

Temperature

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

Operating temperature	T _{operating}	min -20°C	max +45°C
Storage temperature	T _{storage}	min -40°C	max +65°C
Maximum surface temperature of tube at T _{amb.} =25°C	T _{surface}	+60°C	



Approbation & Certificates

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



RoHS



Dimensions (mm)

Product	A1	A2	A3	D
600mm	589.8	595.7	604	27.8
1200mm	1199.4	1205.3	1213.6	27.8

Technical specification

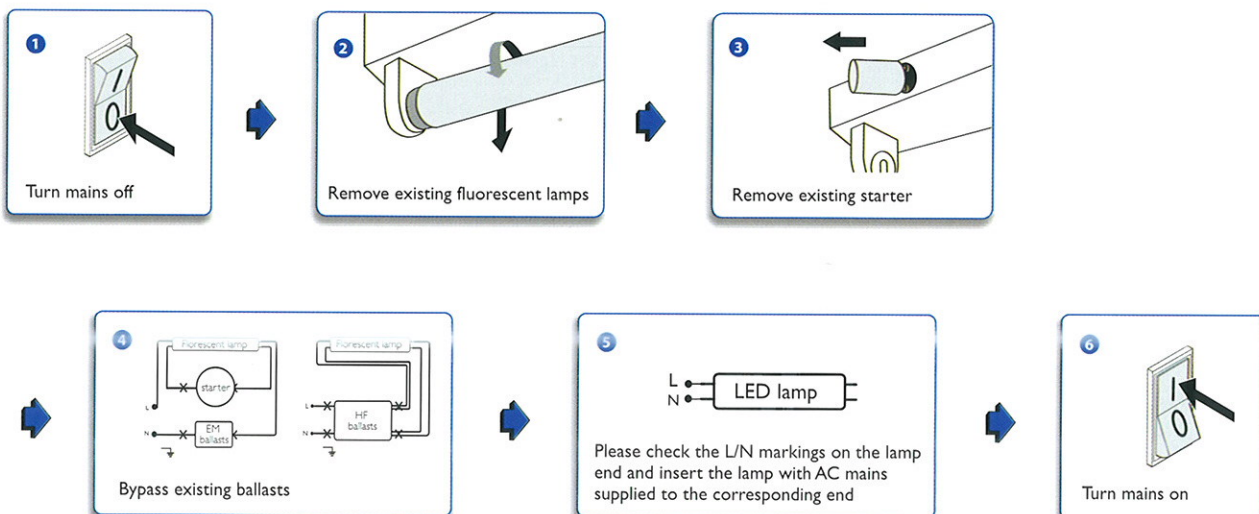
Product Description	Wattage	Voltage	Cap	Length	Beam Angle	Lifetime	Lumen output	CCT	CRI *	Model Number
	(W)	(V)		(mm)	(°)	(hrs)	(lm)	(K)	(Typical)	
LEDtube 1200mm 16W740 T8 CN I G	16	220-240	G13	1200	240	15,000	1600	4000	73	929001127410
LEDtube 1200mm 16W765 T8 CN I G	16	220-240	G13	1200	240	15,000	1600	6500	73	929001127510
LEDtube 600mm 8W740 T8 CN I G	8	220-240	G13	600	240	15,000	800	4000	73	929001127610
LEDtube 600mm 8W765 T8 CN I G	8	220-240	G13	600	240	15,000	800	6500	73	929001127710

* minimum is 70

Quick Installation Guide

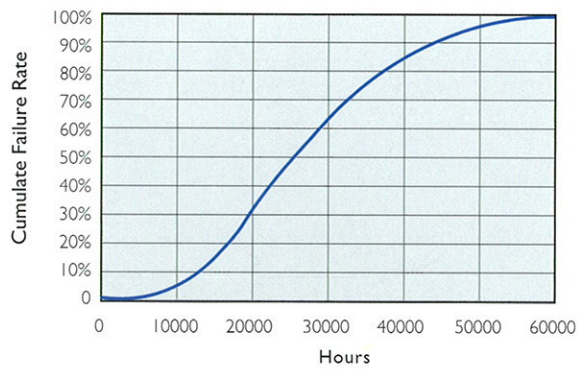
Please take the time to read this quick installation guide. Philips Lighting does not accept liability for any damages for installations not performed according to this guide or not performed by a professional electrician.

Installation Guide

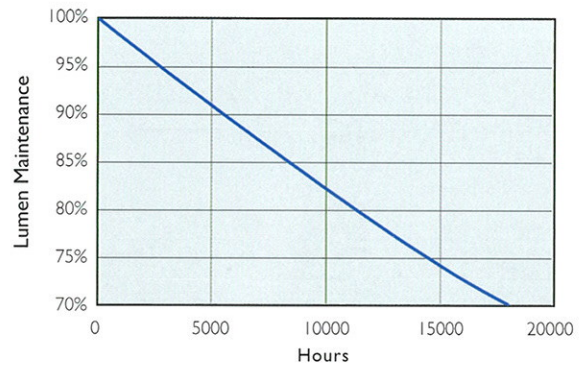


OEM Guideline

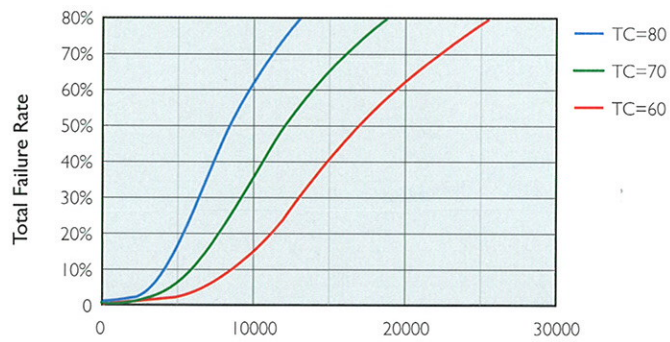
Failure rate vs. Lifetime @ Ta 25 °C



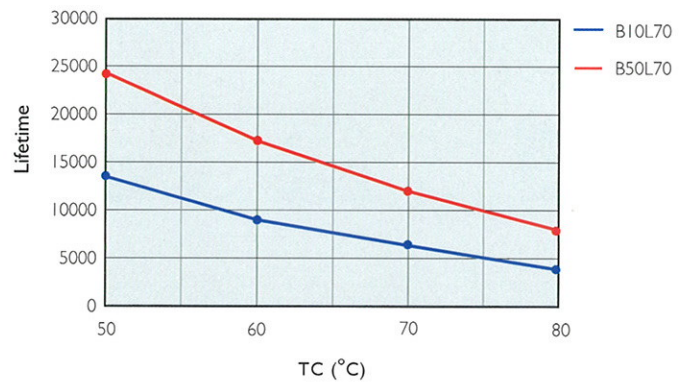
Lumen Maintenance vs. Lifetime



Failure Rate vs.
Lifetime vs. Tcase



Lifetime vs. Tcase



Philips LEDtubes Quality: tested and certified



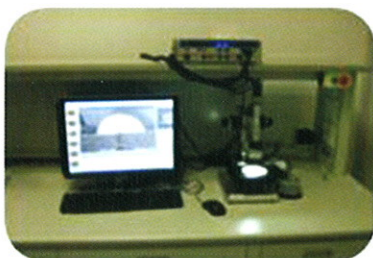
Temperature and Humidity Chamber



Thermal Shock Chamber



HALT Chamber



Failure Analysis Lab



Life-test Lab for Energy Star



Life-test Lab for worse case/free air

List of compliance standard



- IEC 60598-1: 2008 + A11: 2009
- IEC 61347-2-13: 2006
- IEC 61347-1: 2008 + A1: 2011 + A2: 2013
- IEC 62031: 2008 + A1: 2013
- IEC 61195: 1999 + A1: 2013
- IEC 62471: 2008
- IEC 60155: 2011
- IEC 62493: 2010
- IEC 60061-1: 1993 with up to A50: 2014
- LM-79
- LM-80

Luminaires - Part 1: General requirements and tests
 Lamp controlgear Part 2-13: Particular requirements for D.C or A.C. supplied electronic controlgear for LED modules
 Lamp controlgear - Part 1: General and safety requirements
 LED modules for general lighting - Safety specifications
 Double-capped fluorescent lamps-Safety specifications
 Photobiological safety of lamps and lamp systems
 Glow-starters for fluorescent lamps
 Assessment of lighting equipment related to human exposure to electromagnetic fields
 Lamp caps and holders together with gauges for the control of interchangeability and safety -Part 1: Lamp caps
 IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products (luminous flux)
 IESNA Approved Method for Measuring Lumen Depreciation of LED Light Sources

***Remark: There is no harmonized standard for rewiring TLED, the above mentioned standards are partially used.



Dealer: