

Philips LED T8 InstantFit Lamp

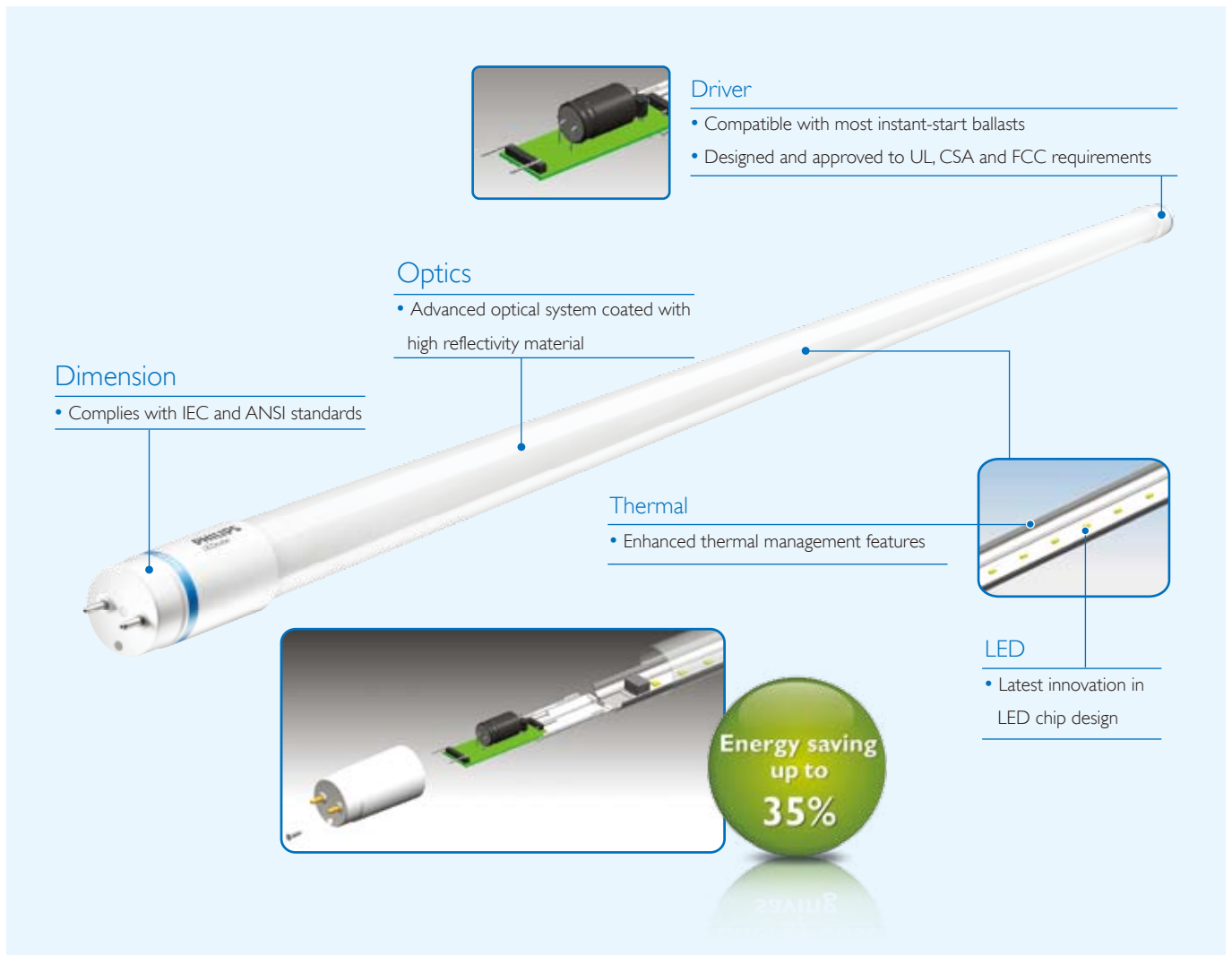


PHILIPS
sense and simplicity



The Philips LED T8 InstantFit lamp is a technology breakthrough out of our LEDtube portfolio. This product is compatible with instant start ballasts and is the easiest way to replace fluorescent tubes with LED tubes. The InstantFit lamp is a true plug-and-play LED solution that realizes an energy savings of up to 35%.





Product Features

Compatibility

- Innovative driver design that enables a “plug-and-play” LED solution to replace existing fluorescent lamps
- Quick and easy installation

Reliability

- Reliable operation between -20 C and 45 C ambient temperature
- Tested to B50 L70 requirement. For systems using a low (0.78) or normal (0.88 or less) ballast factor, InstantFit lamps are rated for 50,000 hours. For systems using a high ballast factor (greater than 0.88), InstantFit products are rated for 40,000 hours. Based on usage of 3 hrs/day, 7 days a week
- 50,000 switching cycles

User Comfort

- CRI 82
- Advanced optical design ensures a uniform light output and superior optical efficiency

Energy Savings

- Energy savings of up to 35%*

Safety

- Over voltage and over temperature protection.
- Complies with UL and CSA safety requirements.
- Shatterproof polycarbonate (PC) material.

Environment

- No Mercury.
- Low Carbon Footprint.

* Based on comparison between 2 x 16.5W LED InstantFit T8 (2-lamp system power = 38W) vs. 2 x 32W T8 TL System (2-lamp system power = 58W), both lighting systems including lamps and reference instant start ballasts with BF 0.88

Application



Retail



Industry



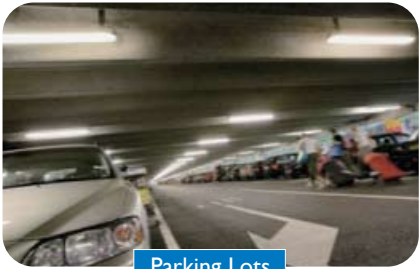
Schools



Hospitals



Offices



Parking Lots

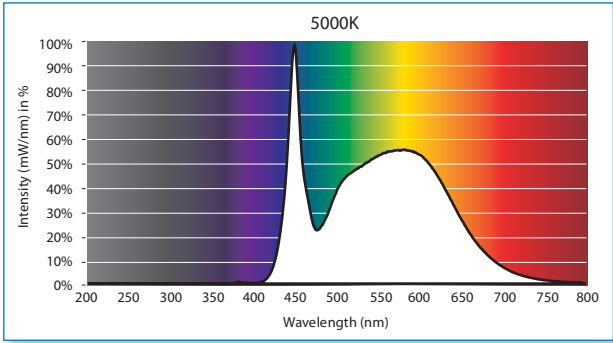
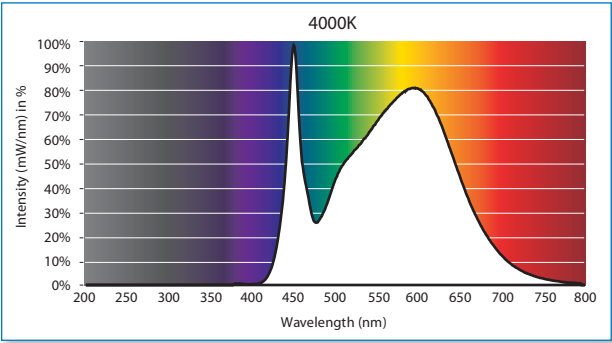
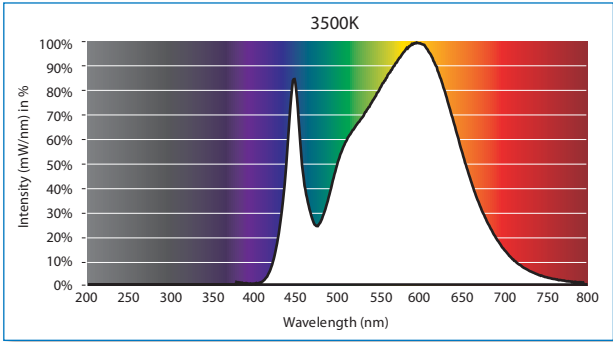
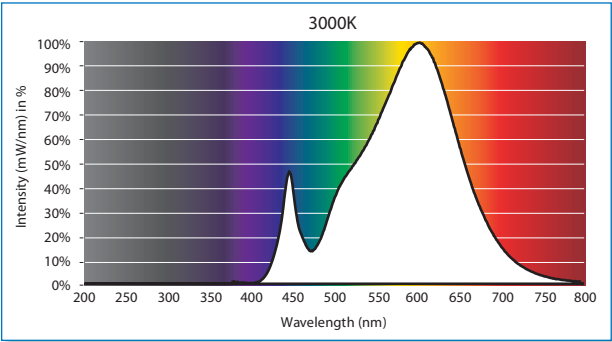


Warehouses



Public Areas

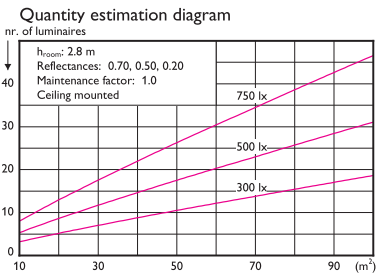
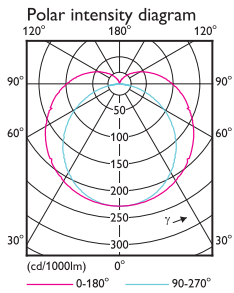
Spectral Power Distribution



Photometric Diagrams

1 x Philips LED T8 InstantFit Lamp 16.5W 3000K/3500K

1 x 2000 lm



Utilisation factor table

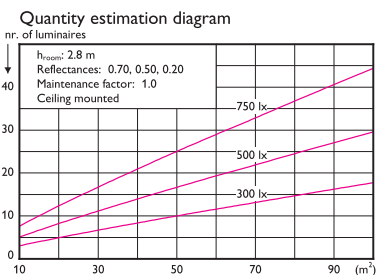
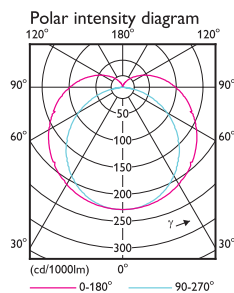
Room Index k	Reflectances (%) for ceiling, walls and working plane (CIE)											
	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
0.60	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
0.80	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.25	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.50	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
2.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
2.50	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
3.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
4.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
5.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00

Luminance Table

Plane Conc.	0.0	15.0	30.0	45.0	60.0	75.0	90.0
45.0	7857	7705	7815	8213	8942	10171	12186
50.0	7515	7327	7408	7786	8476	9707	11862
55.0	7202	6970	7014	7360	7987	9185	11450
60.0	6914	6644	6654	6971	7508	8630	10957
65.0	6651	6342	6318	6607	7017	8003	10303
70.0	6236	5948	5948	6276	6530	7318	9478
75.0	6252	5886	5779	6018	6077	6577	8363
80.0	6106	5697	5599	5846	5852	5885	7803
85.0	5975	5520	5387	5611	5244	4947	4163
90.0	5861	5360	5194	5399	5028	4708	4429

1 x Philips LED T8 InstantFit Lamp 16.5W 4000K

1 x 2100 lm



Utilisation factor table

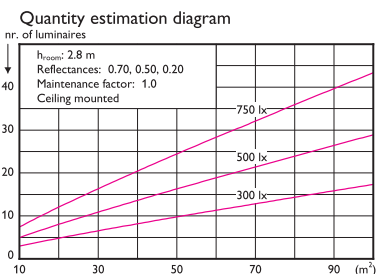
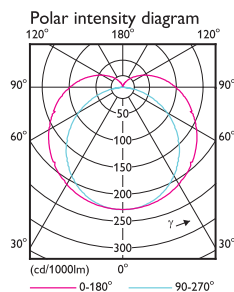
Room Index k	Reflectances (%) for ceiling, walls and working plane (CIE)											
	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
0.60	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
0.80	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.25	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.50	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
2.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
2.50	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
3.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
4.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
5.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00

Luminance Table

Plane Conc.	0.0	15.0	30.0	45.0	60.0	75.0	90.0
45.0	8250	8091	8206	8624	9389	10679	12796
50.0	7891	7693	7779	8176	8900	10192	12455
55.0	7562	7319	7365	7728	8386	9644	12022
60.0	7260	6976	6986	7320	7883	9062	11505
65.0	6983	6659	6634	6937	7368	8403	10819
70.0	6548	6245	6246	6590	6857	7684	9952
75.0	6564	6160	6068	6319	6381	6906	8781
80.0	6411	5982	5879	6138	5305	4079	192
85.0	6274	5797	5657	5892	5508	5194	4373
90.0	6154	5628	5453	5669	5280	4943	1505

1 x Philips LED T8 InstantFit Lamp 16.5W 5000K

1 x 2150 lm



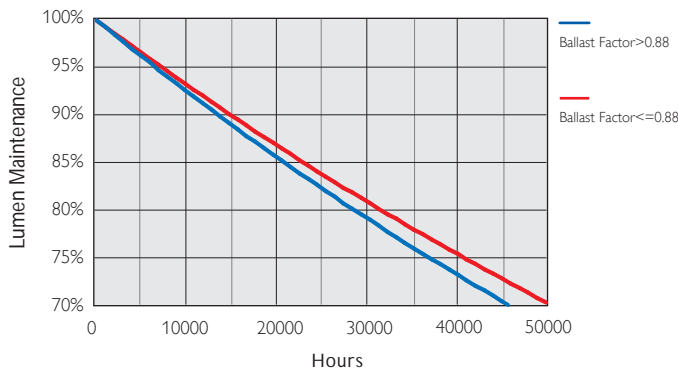
Utilisation factor table

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	0.00	0.00
0.60	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
0.80	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.25	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
1.50	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
2.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
2.50	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
3.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
4.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00
5.00	0.80	0.80	0.70	0.70	0.70	0.70	0.50	0.50	0.30	0.30	0.00	0.00

Luminance Table

Plane Conc.	0.0	15.0	30.0	45.0	60.0	75.0	90.0
45.0	8446	8283	8402	8829	9613	10934	13100
50.0	8079	7877	7964	8370	9112	10435	12751
55.0	7742	7493	7540	7912	8586	9874	12308
60.0	7432	7142	7153	7494	8071	9277	11778
65.0	7149	6818	6792	7102	7543	8603	11076
70.0	6704	6394	6394	6747	7020	7867	10189
75.0	6721	6306	6212	6469	6533	7071	8990
80.0	6564	6125	6019	6284	5432	4176	197
85.0	6423	5934	5791	6032	5639	5317	4475
90.0	6301	5762	5583	5804	5406	5061	1543

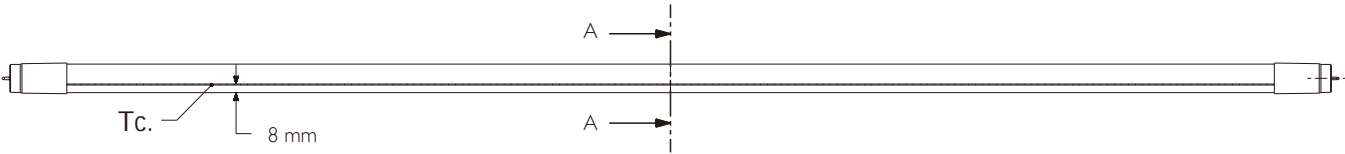
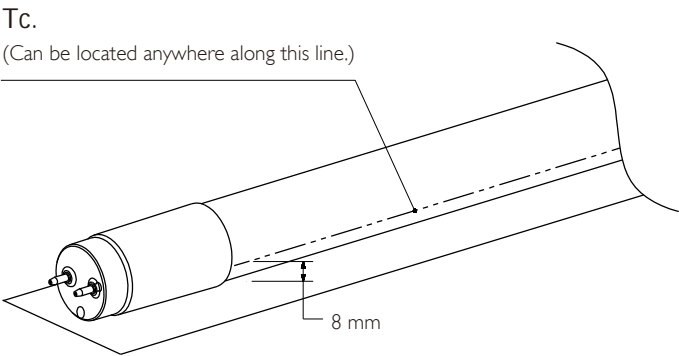
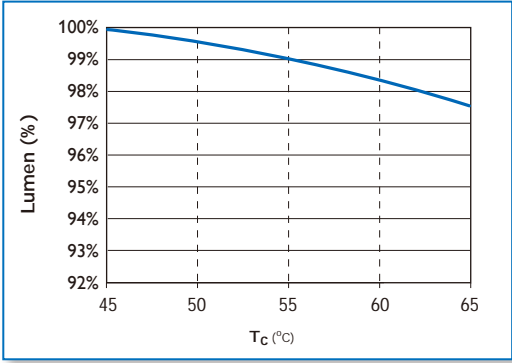
Lifetime and Lumen Maintenance



Philips LED T8 InstantFit Lamp has a lifetime of 50,000 hours for low and normal ballast factors and 40,000 for high ballast factors. This is defined as the number of hours when 50% of a large group of identical lamps drops below 70% of its initial lumens.

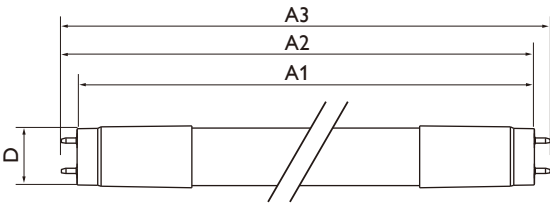
Temperature

Operating temperature	T _{operating}	min -20°C	max +45°C
Storage temperature	T _{case}	min -40°C	max +65°C
Maximum surface temperature for rated lifetime of tube at Tamb.=25°C	T _{case}	+50°C	



Approbation & Certificates

The product complies with **UL, NSF, RoHS, CSA.**



Dimensions (mm)				
Product	A1	A2	A3	D
1200mm	1198	1205	1212	27.8

Technical specification

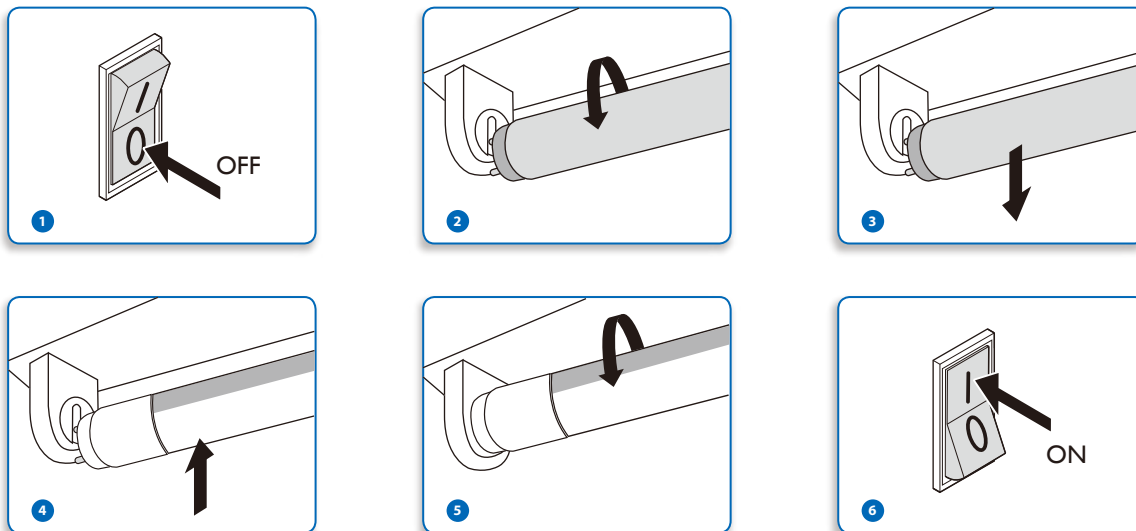
Product Description	Bare Lamp Wattage (W)			Average System (W)			Initial Lumens			Rated Avg. Life *	Base	Length (In.)	Bulb Type	Product No.
	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)	Low Ballast Factor (0.78)	Normal Ballast Factor (0.88)	High Ballast Factor (1.18)					
16.5T8/48-3000 IF 10/1	14	16.5	21	17.5	19	25.5	1800	2000	2700	40,000	G13	48	T8	434860
16.5T8/48-3500 IF 10/1	14	16.5	21	17.5	19	25.5	1800	2000	2700	40,000	G13	48	T8	434878
16.5T8/48-4000 IF 10/1	14	16.5	21	17.5	19	25.5	1900	2100	2800	40,000	G13	48	T8	434886
16.5T8/48-5000 IF 10/1	14	16.5	21	17.5	19	25.5	1950	2150	2900	40,000	G13	48	T8	434894

* Tested to B50 L70 requirement. For systems using a low (0.78) or normal (0.88 or less) ballast factor, InstantFit lamps are rated for 50,000 hours.

For systems using a high ballast factor (greater than 0.88), InstantFit products are rated for 40,000 hours. Based on usage of 3 hrs/day, 7 days a week.

Installation Guide

The Philips LED T8 InstantFit lamp automatically adjust its light output that corresponds to the ballast factor that it is connected to Installation Guide.



Please refer to www.philips.com/tled for the latest ballast compatibility guide.

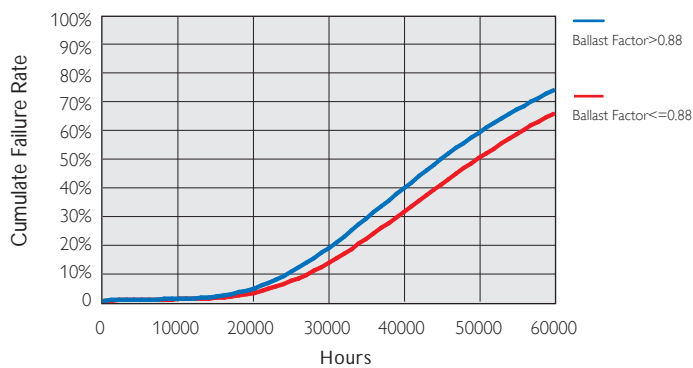
Application Notes

- Product is not dimmable.
- Suitable for dry & damp locations.
- Operating fixture ambient is -20°C and +45°C.
- Always switch off power to the luminaire before commencing work.
- Compatible only with instant-start ballasts. Please refer to www.philips.com/tled for the latest ballast compatibility guide.
- Luminaires must have shunted lamp holders. Ensure that the Philips LED T8 InstantFit lamp pins are firmly seated in their lampholders.
- Philips LED T8 InstantFit lamps are not compatible with luminaires that use a remote starter.
- Philips LED T8 InstantFit lamps are intended to retrofit, UL Listed surface mount, or type IC or non-IC recessed mount fluorescent luminaires with or without diffuser that use straight tubular lamps.

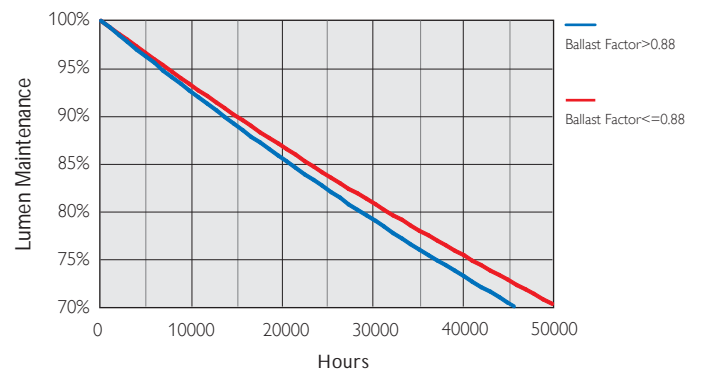
- Pre-Heat Luminaire and Caution stating “CAUTION – RISK OF FIRE. DO NOT INSTALL IN A PRE-HEAT LUMINIRE”. Some older fluorescent luminaires contain a starter that heats the filaments for several seconds before starting the lamp. These luminaires are called Pre-Heat luminaires. They employ a starter which is typically housed in a small cylindrical metal can. The risk of fire hazard could possibly be due to zero impedance across the ballast when the filament is not present and the pins are shorted. This can cause higher currents through the circuit than when starting a fluorescent lamp, causing the ballast to overheat. The pins of the InstantFit TLED are not interernally shorted and therefore there is no current going through the circuit. InstantFit TLEDs have been tested to ensure there is no hazard when accidentally installed in a pre-heat luminaire, however Philips does not guarantee proper operation.
- Philips LED T8 InstantFit lamps can be used with emergency ballasts that are approved by the emergency ballast manufacturer and Philips. Please refer to www.philips.com/tled for an approved list of emergency ballast that are compatible with the Philips LED T8 InstantFit lamps.

OEM Guideline

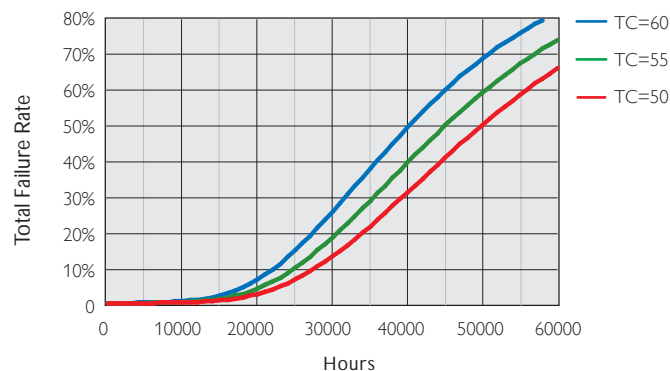
Failure rate vs. Lifetime @ Ta 25 °C



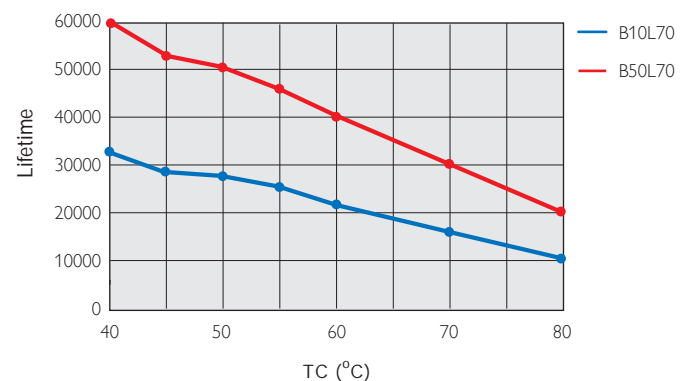
Lumen Maintenance vs. Lifetime



Failure Rate vs. Lifetime vs. Tcase



Lifetime vs. Tcase



© 2014 Philips Lighting

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent or other industrial or intellectual property rights.

04/2014
www.philips.com