

# T8WattMiser™ linear fluorescent lamps



## Product Information

T8 Watt-Miser™ lamps are triphosphor fluorescent lamps with 26mm outer diameter for indoor applications. These new lamps offer significant energy savings versus standard T8 halophosphate & T8 PolyLux linear fluorescent lamps.

## Features

T8 Watt-Miser™ lamps consume up to 10% less energy compared with today's standard T8 lamps, while having 15,000 hours life and excellent colour rendering index of CRI 85. Lamps are optimised for 30°C ambient temperature, offering up to 90 lm/W luminous efficacy. The elevated optimum temperature results in additional energy saving versus standard T8 lamps in typical indoor lighting applications. Standard T8 lamps can be easily replaced with the new T8 Watt-Miser™ lamps in the existing lighting applications, since new electronic control gears are not required. These new lamps from GE enable even less than 12 months payback time.

GE is committed to fight against climate change. The T8 Watt-Miser™ lamps will contribute to the global effort to reduce CO<sub>2</sub> emission. One lamp can save up to 6.0 kg CO<sub>2</sub> per year. So in addition to the lower energy bill, millions of tons of CO<sub>2</sub> could potentially be saved with this new lamp technology.

## Application areas

T8 Watt-Miser™ lamps are mostly recommended for general indoor applications, such as:

- Retail
- Offices
- Schools
- Commercial
- Industrial
- Sports halls

## Product Range

GE T8 Watt-Miser™ lamps are available in 16W and 32W in 4 standard colour temperatures.

The available colour temperatures are:

- 3000K warm white
- 3500K white
- 4000K cool white
- 6000K daylight

## Compliance

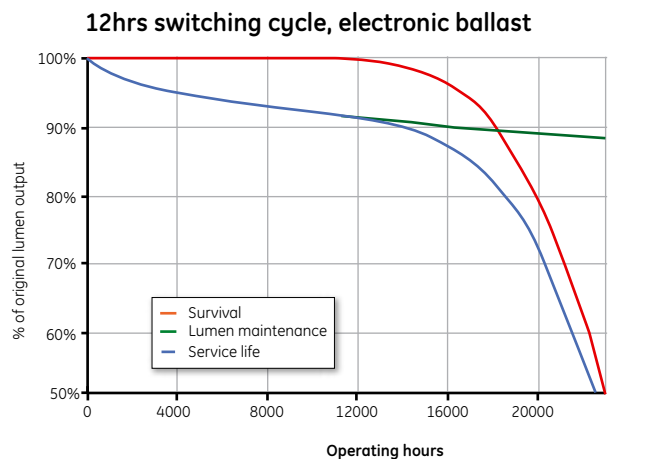
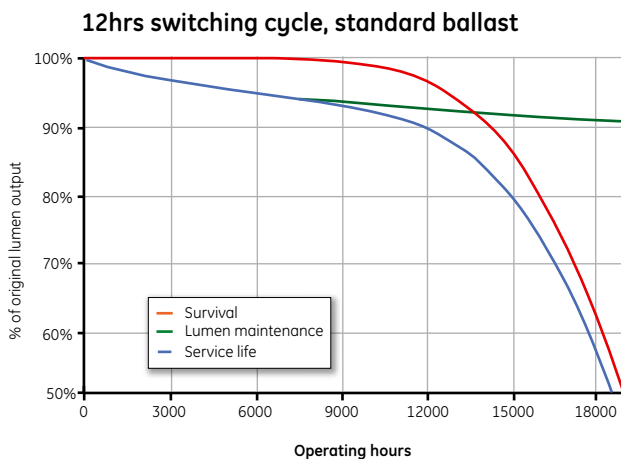
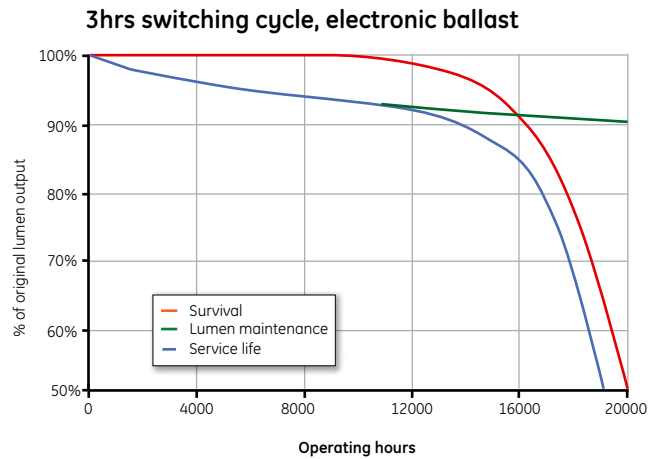
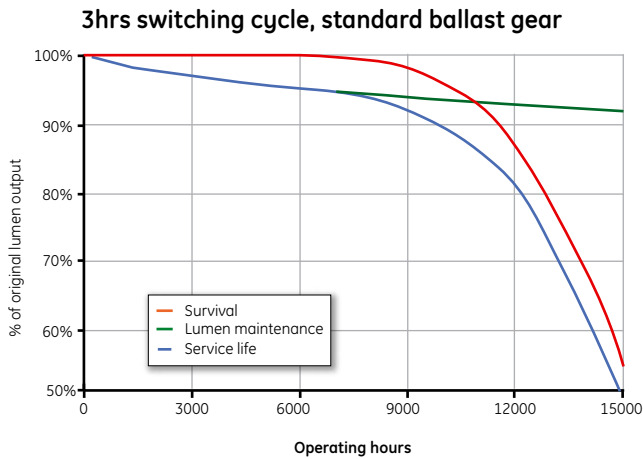
The T8 Watt-Miser™ linear fluorescent lamps comply with IEC/EN 60061, IEC/EN 60081 and IEC/EN 61195



## Basic data

Nominal [W]	Length [mm]	Product description	CCT [K]	CRI [Ra]	Rated av. life at 3h-cycle on standard ballast [h]	Rated av. life at 3h-cycle on electronic ballast [h]	Initial lumens at 30° C [lm]	Rated power at 30° C [W]	Pack Qty	Energy Class
16	600	TU F18/T8/830 16W Watt-Miser GE	3000	85	15000	20000	1320	16.4	25	A
16		TU F18/T8/835 16W Watt-Miser GE	3500	85	15000	20000	1320	16.4	25	A
16		TU F18/T8/840 16W Watt-Miser GE	4000	85	15000	20000	1320	16.4	25	A
16		TU F18/T8/860 16W Watt-Miser GE	6300	85	15000	20000	1320	16.4	25	A
32	1200	TU F36/T8/830 32W Watt-Miser GE	3000	85	15000	20000	2925	32.5	25	A
32		TU F36/T8/835 32W Watt-Miser GE	3500	85	15000	20000	2925	32.5	25	A
32		TU F36/T8/840 32W Watt-Miser GE	4000	85	15000	20000	2925	32.5	25	A
32		TU F36/T8/860 32W Watt-Miser GE	6300	85	15000	20000	2925	32.5	25	A

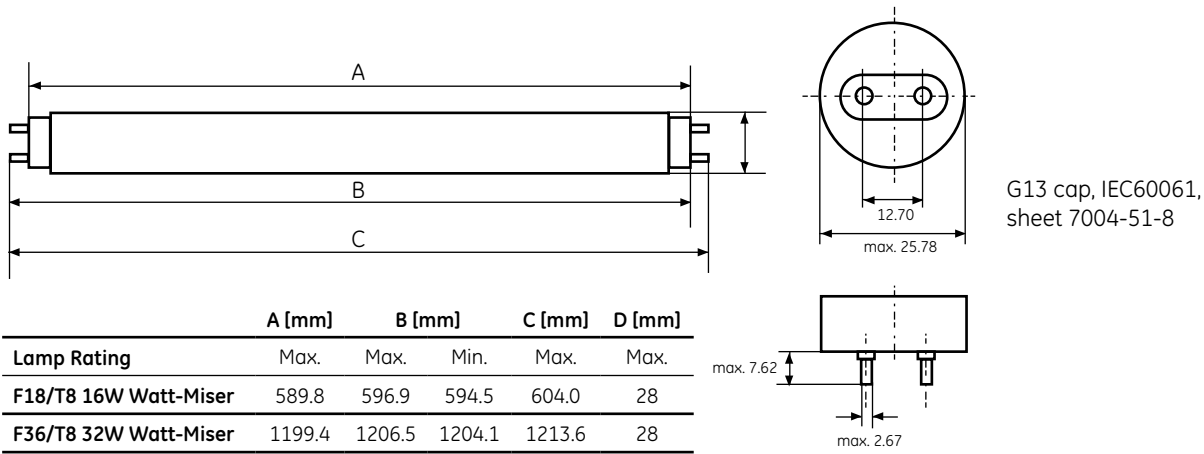
## Life and lumen maintenance



Service life curve is defined as the product of the survival rate and the lumen maintenance. The rated value is at 80%.

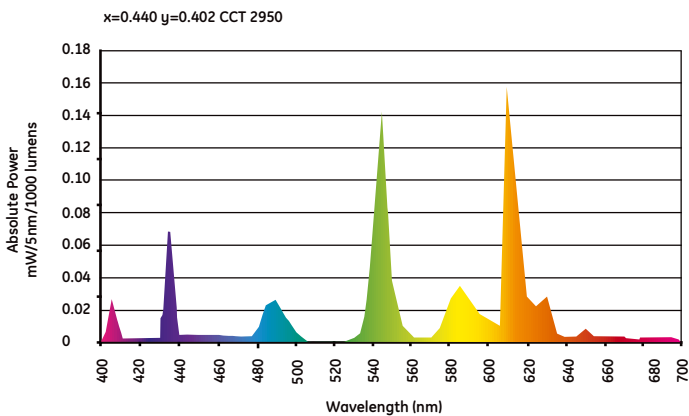
	3hr standard ballast	3hrs electronic ballast	12hrs standard ballast	12hrs electronic ballast
<b>Survival B50 (hrs)</b>	15000	20000	18000	23000
<b>Service life (hrs)</b>	12000	16500	15000	18500

## Dimension

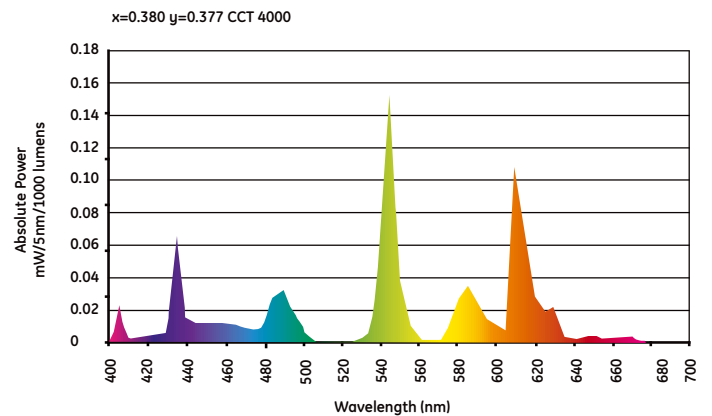


## Spectral power distribution

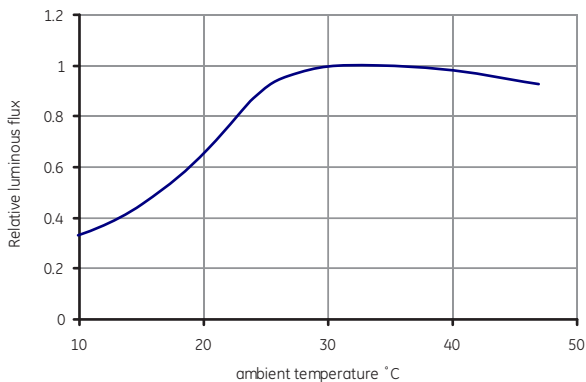
T8 Watt-Miser 830



T8 Watt-Miser 840



## Influence of ambient temperature on light output



Lamp performance parameters, such as luminous output, lamp voltage and power depend on the mercury vapour pressure in the discharge tube. The mercury vapour pressure is affected by the thermal conditions determined by factors such as burning position, air flow, radiating heat sources, etc. T8 Watt-Miser™ lamps are optimised for 30°C ambient temperature.

# Information for control gear manufacturers and OEMs

## Electrical and photometric characteristics

	Lamp current [mA]	Lamp voltage [V]	Lamp wattage [W]	Luminous flux at 25°C [lm]	Luminous flux at 30°C [lm]	Efficacy at 30°C [lm/W]
F18 T8 Watt-Miser 16W 830, 835, 840	382	51	16.4	1300	1320	80
F18 T8 Watt-Miser 16W 860	382	51	16.4	1230	1250	76
F36 T8 Watt-Miser 32W 830, 835, 840	450	90	32.0	2750	2925	90
F36 T8 Watt-Miser 32W 860	450	90	32.0	2600	2765	85

## Reference Ballast Characteristics

Fluorescent Lamp		Ballast Characteristics				
Rating	Length [mm]	Watt (lamp)	Rated Voltage [V]	Calibration Current [A]	Ratio [V/A]	Power Factor
18W	600	20	220	0.37	270	0.12
36W	1200	40	220	0.43	390	0.1

## Ballasts approved by GE Lighting

Ballasts meeting the relevant IEC standards would be compliant with T8 Watt-Miser lamps. The list of ballasts tested by GE Lighting is available on request.

## Recommendation for measuring T8 lamps

Before measuring, the lamps should be seasoned for approx. 100 hours. During testing, the luminous flux of the lamp should be stabilized by preheating, i. e. operating it at  $25\pm 1^\circ\text{C}$  for 30 minutes.

## Special product features

To create this premium energy efficient T8 product, new base fill gas has been applied. The fill gas has a beneficial influence on decreasing power and increasing optimum temperature. Lamp warm-up time (i.e. when the lumen output reaches 90% of its maximum) is on average 2 minutes.