



# Maximize energy savings without sacrificing light output

## T5 High Output Energy Advantage

Philips Energy Advantage T5 HO 49W lamps are environmentally-responsible, ultra-slim and have extraordinary light output with increased energy savings.

### Benefits

- Outstanding energy savings - save 5 watts when switching from a standard T5 HO 54W lamp, with no sacrifice to performance.
- Sustainable Lighting Solution - only 1.4 mg of mercury per lamp - the lowest mercury levels in the industry.
- With just 12 Picograms per lumen hour<sup>◇</sup>, these lamps allow for more design freedom and help exceed all LEED requirements (For more information on LEED, please visit [www.usgbc.org](http://www.usgbc.org))

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## Features

- Reduced maintenance and disposal costs.
- Long life (40,000 hrs RAL\*\*) for an extended relamping cycle.
- Outstanding energy savings - save 5 watts when switching from a standard T5 HO 54W lamp, with no sacrifice to performance.
- Save \$20.00 instantly in energy costs over the rated average life§ of the lamp
- Operates on any Programmed Start ballast.
- Sustainable lighting solution- Reduces the impact on the environment: low mercury, energy efficiency, long life, and less material.
- Only 1.4 mg of mercury, the lowest in the industry.
- With just 9.8 Picograms per lumen hour◇, these lamps allow for more design freedom and help exceed all LEED requirements‡.
- Extreme Temperature lamp provides extraordinary output even in spaces without climate control. Lumen output is >90% from 65 degrees F to 170 degrees F due to amalgam technology.
- Available in 49 Watt - 3000K, 3500K, 4100K and 5000K Color Temperatures.

## Application

- Ideal for medium-bay and high-bay retail and industrial applications.

## Warnings and Safety

- Lamp contains mercury. Manage in Accord with Disposal Laws. See: [www.lamprecycle.org](http://www.lamprecycle.org) or 1-800-555-0050

## Versions



G5, T5

## Dimensional drawing

Product	D (max)	A (max)	B (max)	B (min)	C (max)
F54T5 835 HO EA ALTO 49W	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
F54T5 850 HO EA ALTO 49W	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
F54T5 841 HO EA ALTO 49W	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm

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## Approval and Application

Energy Efficiency Label (EEL)	A
Mercury (Hg) Content (Nom)	1.4 mg

## Controls and Dimming

Dimmable	Yes
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## Operating and Electrical

Lamp Current (Nom)	0.460 A
Power (Rated) (Nom)	48.0 W

## General Information

Cap-Base	G5
Life To 50% Failures Preheat (Nom)	30000 h
LSF Preheat 16000 h Rated	99 %
LSF Preheat 20000 h Rated	94 %
LSF Preheat 2000 h Rated	99 %
LSF Preheat 4000 h Rated	99 %
LSF Preheat 6000 h Rated	99 %
LSF Preheat 8000 h Rated	99 %

## Light Technical

Color Rendering Index (Max)	85
Color Rendering Index (Min)	80
Color Rendering Index (Nom)	82
LLMF 12000 h Rated	92 %
LLMF 16000 h Rated	91 %
LLMF 2000 h Rated	96 %
LLMF 20000 h Rated	90 %
LLMF 4000 h Rated	95 %
LLMF 6000 h Rated	94 %
LLMF 8000 h Rated	93 %

## Mechanical and Housing

Bulb Shape	T5
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## Temperature

Design Temperature (Nom)	35 °C
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## Light Technical (1/2)

Order Code	Full Product Name	Color Code	Color Designation	Correlated Color Temperature (Nom)	Luminous Efficacy (@ Max Lumen, Rated) (Nom)
220509	F54T5/835/HO/EA/ALTO 49W 40/1	835	White (WH)	3500 K	102 lm/W
220525	F54T5/841/HO/EA/ALTO 49W 40/1	841	Cool White (CW)	4100 K	102 lm/W
406496	F54T5/850/HO/EA/ALTO 49W 40/1	850	Daylight	5000 K	98 lm/W

## Light Technical (2/2)

Order Code	Full Product Name	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
220509	F54T5/835/HO/EA/ALTO 49W 40/1	93 lm/W	5000 lm	4450 lm
220525	F54T5/841/HO/EA/ALTO 49W 40/1	93 lm/W	5000 lm	4450 lm

Order Code	Full Product Name	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
406496	F54T5/850/HO/EA/ALTO 49W 40/1	89 lm/W	4800 lm	4275 lm

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