

# Philips ALTO II Technology

Philips T8 Fluorescent Lamps featuring ALTO II Technology  
Better for your business, Better for the environment



ALTO lamps with green endcaps have become synonymous with environmental responsibility and low mercury. Since the launch of ALTO Lamp Technology in 1995, 2.0 billion Philips fluorescent lamps with ALTO Lamp Technology have been produced with over 20 tons less mercury than previous non-ALTO lamps<sup>1</sup>.

Philips launched ALTO II Technology in 2007. ALTO II technology has 50% less mercury than prior T8 lamps featuring ALTO technology, making these lamps the most sustainable linear fluorescents available. Best of all, these lamps offer the same performance levels as ALTO lamps (life, energy, and light output).

## PHILIPS T8 LAMP WARRANTY PERIODS

PHILIPS LAMP	WARRANTY PERIOD <sup>2</sup>
T8 17W, 25W and 32W, 700 and 800 Series	30 Months
Energy Advantage 25W and 28W	36 Months
PLUST8 17W, 25W, and 32W	36 Months
Advantage T8 32W	36 Months
T8 32W Extra Long Life	48 Months
Energy Advantage T8 25W Extra Long Life	48 Months

## DID YOU KNOW?

- ALTO II T8 lamps have warranty periods ranging from 2½–4 years<sup>3</sup>
- ALTO II T8 lamps require no burn in before dimming
- ALTO II T8 lamps can contribute to LEED-EB certification. For more information go to [www.usgbc.org](http://www.usgbc.org)

## PHILIPS T8 LAMP FAMILY—LIFE RATINGS

Products	INSTANT START <sup>4</sup>		PROGRAMMED START <sup>5</sup>	
	Rated Average Life (Hrs.)		Rated Average Life (Hrs.)	
	3 hour start	12 hour start	3 hour start	12 hour start
700 and 800 Series T8	24,000	30,000	30,000	36,000
PLUST8	30,000	36,000	36,000	42,000
Advantage T8	24,000	30,000	30,000	36,000
Energy Advantage T8 25W and 28W	30,000	36,000	36,000	42,000
32W Extra Long Life	36,000	40,000	40,000	46,000
Energy Advantage T8 25W and 28W Extra Long Life	36,000	40,000	40,000	46,000

1) [1994 industry average (22.8mg)—PLC average (4.0mg)] x 2 billion lamps. Convert to pounds by dividing by 464. Convert to tons by dividing by 2000.

2) Certain limitations and conditions apply. See Philips for further warranty details.

3) Warranty Periods: 700 & 800 Series T8—30 months; Energy Advantage T8—36 months; PLUST8—36 months; and Advantage T8—36 months; Extra Long Life T8—48 months; Energy Advantage Extra Long Life T8—48 months.

4) Average life under engineering data on instant start ballast with lamps turned off and restarted once every 3 or 12 operating hours as indicated.

5) Average life under engineering data on programmed start ballast with lamps turned off and restarted once every 3 or 12 operating hours as noted.

# FLUORESCENT LAMPS

## Energy Advantage T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start	12 Hr. Start (241)			

### ENERGY ADVANTAGE T8 25 WATT FLUORESCENT LAMPS

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

25	I3781-0	\$ ④ ●	F32T8/ADV830/XEW/ALTO 25 WATT	25	Advantage 830, 3000K	48	30,000	36,000	2500	2450	85
	I3782-8	\$ ④ ●	F32T8/ADV835/XEW/ALTO 25 WATT	25	Advantage 835, 3500K	48	30,000	36,000	2500	2450	85
	I3783-6	\$ ④ ●	F32T8/ADV841/XEW/ALTO 25 WATT	25	Advantage 841, 4100K	48	30,000	36,000	2500	2450	85
	I5238-9	\$ ④ ● †	F32T8/ADV841/XEW/ALTO 25 WATT	10	Advantage 841, 4100K, 10PK	48	30,000	36,000	2500	2450	85
	I3784-4	\$ ④ ●	F32T8/ADV850/XEW/ALTO 25 WATT	25	Advantage 850, 5000K	48	30,000	36,000	2400	2350	82

### ENERGY ADVANTAGE T8 28 WATT FLUORESCENT LAMPS

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

28	I4732-2	\$ ④ ●	F32T8/ADV830/EW/ALTO 28 WATT	25	Advantage 830, 3000K	48	30,000	36,000	2725	2645	85
	I4733-0	\$ ④ ●	F32T8/ADV835/EW/ALTO 28 WATT	25	Advantage 835, 3500K	48	30,000	36,000	2725	2645	85
	I4734-8	\$ ④ ●	F32T8/ADV841/EW/ALTO 28 WATT	25	Advantage 841, 4100K	48	30,000	36,000	2725	2645	85
	I4735-5	\$ ④ ●	F32T8/ADV850/EW/ALTO 28 WATT	25	Advantage 850, 5000K	48	30,000	36,000	2675	2595	82

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)  
Fluorescent symbols and footnotes located on page 51

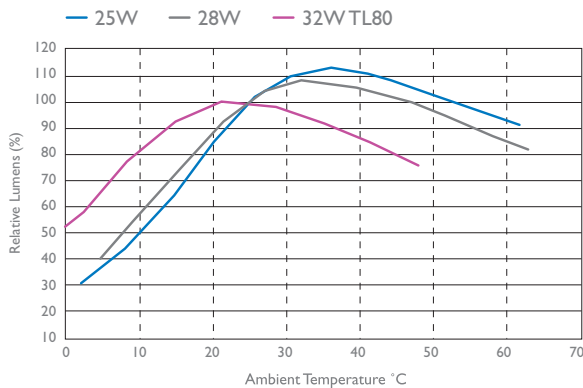
**PHILIPS ENERGY ADVANTAGE T8**

Warranty Period: 36 months\*

\* Certain limitations and conditions apply. See Philips for further warranty details.

### RELATIVE LIGHT OUTPUT VS. AMBIENT TEMP.

4' T8 Lamps—0.88 BF Ballast



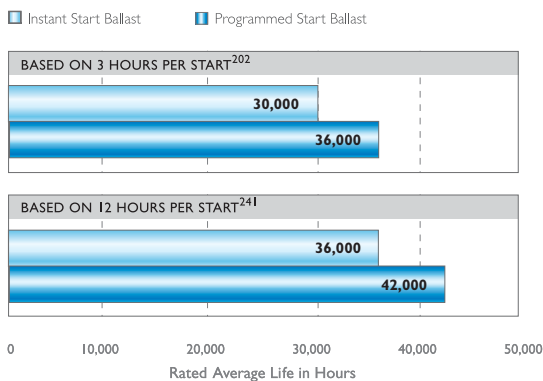
Relative light output with respect to 25°C rated temperature

### ENERGY ADVANTAGE 25W T8 SAVINGS

Save 7 Watts Instantly			
7 watts per lamp saved	Energy Savings Calculator		
	Annual Operating Hours**	Savings Over Lamp Life	
<b>KWH Rate</b>	<b>4380</b>	<b>8760</b>	<b>36,000 hrs.</b>
\$0.06	\$1.84	\$3.68	\$15.12
\$0.08	\$2.45	\$4.90	\$20.16
\$0.10	\$3.07	\$6.13	\$25.20
\$0.12	\$3.68	\$7.36	\$30.24
\$0.20	\$6.13	\$12.26	\$50.40

\*\* 4380 hours are based on operating the lamps 12 hours per day/7 days per week.  
8760 hours are based on operating the lamps 24 hours per day/7 days per week.

### RATED AVERAGE LIFE



T8 Medium Bipin

### Cost of Ownership Savings

Energy Advantage T8 fluorescent lamps vs. standard T8 lamps.

### General Overview

Energy Advantage 25WT8 fluorescent lamps provide energy savings of up to 25% versus standard 32WT8, so the benefits and financial impact can be significant.

### Benefits

By using Energy Advantage 25WT8 lamps the energy savings of 7 watts per lamp can be achieved instantly by simply changing the lamp.

### Financial Impact

Energy Savings per Lamp	7 Watts
Operating Hours per Year	8760 hours, continuous burn
Cost per kWh	\$.10

**Cost of Ownership Savings = \$6.13 per lamp per year**

# FLUORESCENT LAMPS

## Extra Long Life (XLL) T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### EXTRA LONG LIFE ENERGY ADVANTAGE 25 WATT T8 FLUORESCENT LAMP

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

25	15206-6	\$ ●	F32T8/ADV830/XLL/ALTO 25 WATT	25	Advantage 830, 3000K	48	36,000	40,000	2425	2375	85
	15207-4	\$ ●	F32T8/ADV835/XLL/ALTO 25 WATT	25	Advantage 835, 3500K	48	36,000	40,000	2425	2375	85
	15208-2	\$ ●	F32T8/ADV841/XLL/ALTO 25 WATT	25	Advantage 841, 4100K	48	36,000	40,000	2425	2375	85
	15209-0	\$ ●	F32T8/ADV850/XLL/ALTO 25 WATT	25	Advantage 850, 5000K	48	36,000	40,000	2325	2275	82

### EXTRA LONG LIFE ENERGY ADVANTAGE 28 WATT T8 FLUORESCENT LAMP

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

28	23454-2	●	F32T8/ADV830/XLL/ALTO 28 WATT	25	Advantage 830, 3000K	48	36,000	40,000	2675	2600	85
	23726-3	●	F32T8/ADV835/XLL/ALTO 28 WATT	25	Advantage 835, 3500K	48	36,000	40,000	2675	2600	85
	16933-4	●	F32T8/ADV841/XLL/ALTO 28 WATT	25	Advantage 841, 4100K	48	36,000	40,000	2675	2600	85
	16938-3	●	F32T8/ADV850/XLL/ALTO 28 WATT	25	Advantage 850, 5000K	48	36,000	40,000	2625	2550	82

### EXTRA LONG LIFE 32 WATT T8 FLUORESCENT LAMPS

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

32	15202-5	\$ ④ ●	F32T8/TL830/XLL/ALTO	25	TL 830, 3000K	48	36,000	40,000	2950	2800	85
	15203-3	\$ ④ ●	F32T8/TL835/XLL/ALTO	25	TL 835, 3500K	48	36,000	40,000	2950	2800	85
	15204-1	\$ ④ ●	F32T8/TL841/XLL/ALTO	25	TL 841, 4100K	48	36,000	40,000	2950	2800	85
	15205-8	\$ ④ ●	F32T8/TL850/XLL/ALTO	25	TL 850, 5000K	48	36,000	40,000	2850	2700	82

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)  
Fluorescent symbols and footnotes located on page 51

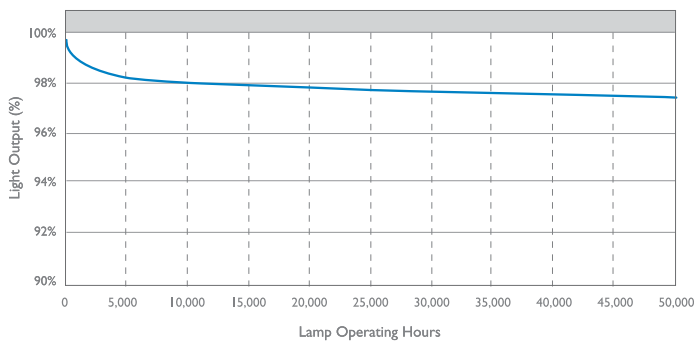
**PHILIPS EXTRA  
LONG LIFE T8**

Warranty Period: 48 months\*

\* Certain limitations and conditions apply.  
See Philips for further warranty details.

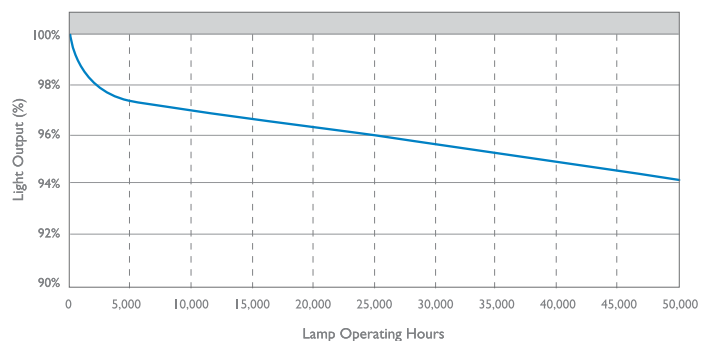
### 98% LUMEN MAINTENANCE

Philips Energy Advantage T8 25W XEW and XLL Lamps



### 97% LUMEN MAINTENANCE

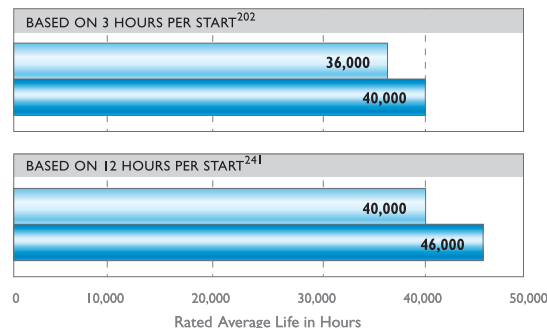
Philips Energy Advantage T8 28W XEW and XLL Lamps



### RATED AVERAGE LIFE

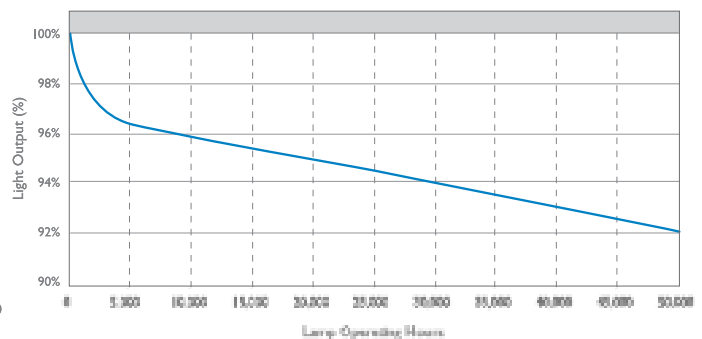


Instant Start Ballast   Programmed Start Ballast



### 95% LUMEN MAINTENANCE

Philips T8 32W XLL Lamps



# FLUORESCENT LAMPS

## Advantage T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208, 239)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### ADVANTAGE T8 HIGH LUMEN FLUORESCENT LAMPS

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

17	20483-4	\$ ④ ●	F17T8/ADV830/ALTO	25	Advantage 830, 3000K	24	24,000	30,000	1500	1450	85
	20484-2	\$ ④ ●	F17T8/ADV835/ALTO	25	Advantage 835, 3500K	24	24,000	30,000	1500	1450	85
	20485-9	\$ ④ ●	F17T8/ADV841/ALTO	25	Advantage 841, 4100K	24	24,000	30,000	1500	1450	85
	20487-5	\$ ④ ●	F17T8/ADV850/ALTO	25	Advantage 850, 5000K	24	24,000	30,000	1425	1380	82
25	20488-3	\$ ④ ●	F25T8/ADV830/ALTO	25	Advantage 830, 3000K	36	24,000	30,000	2380	2300	85
	20490-9	\$ ④ ●	F25T8/ADV835/ALTO	25	Advantage 835, 3500K	36	24,000	30,000	2380	2300	85
	20495-8	\$ ④ ●	F25T8/ADV841/ALTO	25	Advantage 841, 4100K	36	24,000	30,000	2380	2300	85
	20498-2	\$ ④ ●	F25T8/ADV850/ALTO	25	Advantage 850, 5000K	36	24,000	30,000	2275	2210	82
32	13987-3	□ \$ ④ ●	F32T8/ADV830/ALTO	25	Advantage 830, 3000K	48	24,000	30,000	3100	3000	85
	13988-1	□ \$ ④ ●	F32T8/ADV835/ALTO	25	Advantage 835, 3500K	48	24,000	30,000	3100	3000	85
	13989-9	□ \$ ④ ●	F32T8/ADV841/ALTO	25	Advantage 841, 4100K	48	24,000	30,000	3100	3000	85
	13990-7	□ \$ ④ ●	F32T8/ADV850/ALTO	25	Advantage 850, 5000K	48	24,000	30,000	3000	2910	82

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)  
Fluorescent symbols and footnotes located on page 51

**PHILIPS ADVANTAGE T8**

Warranty Period: 36 months\*

\* Certain limitations and conditions apply.  
See Philips for further warranty details.

### ENERGY SAVINGS: TWO LAMP VS. TWO LAMP SYSTEM

Electronic Ballast	Ballast Factor	No. of Lamps	Lamp Watts	Standard T8 Lumens	Advantage T8 Lumens	System Watts	Savings
Standard T8	0.87	2	32	2850	—	58	—
Reduced Light Output T8	0.75	2	32	—	3100	51	\$2.80/yr

Combine Advantage T8 lamps with reduced light output electronic ballasts, with these results:

- Saves 7 system watts vs. standard T8 system
- Saves \$2.80 per fixture per year
- Energy savings based on 4000 hrs/yr @ \$.10 kw/hr

### ENERGY SAVINGS: TWO LAMP VS. THREE LAMP SYSTEM

Electronic Ballast	Ballast Factor	No. of Lamps	Lamp Watts	Standard T8 Lumens	Advantage T8 Lumens	System Watts	Savings
Standard T8	0.87	3	32	2850	—	88	—
Increased Light Output T8	1.20	2	32	—	3100	78	\$4.00/yr

Combine advantage T8 lamps with increased light output ballasts. A two lamp advantage T8 system vs. a three lamp standard T8 system will:

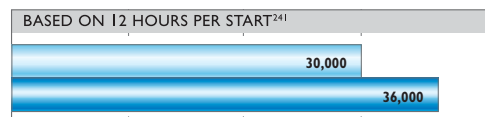
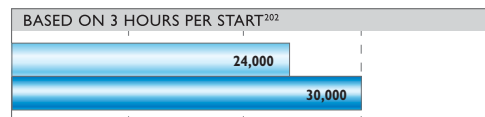
- Save 10 system watts
- Save \$4.00 per fixture per year
- Save energy based on 4000 hrs/yr @ \$.10 kw/hr
- Reduce lighting installation costs (lamps, ballasts, fixtures and labor)
- Operate on ballast with ballast factors up to 1.32 with warranty intact



T8 Medium Bipin

### RATED AVERAGE LIFE

- Philips Advantage Instant Start Ballast
- Philips Advantage Programmed Start Ballast



Rated Average Life in Hours

# FLUORESCENT LAMPS

## PLUS 800 Series T8 Lamps, PLUS 700 Series T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208, 239)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### PLUS 800 SERIES LONG LIFE T8 FLUORESCENT LAMPS

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

17	I4552-4	\$ @ ●	F17T8/TL830/PLUS/ALTO	25	TL 830, 3000K	24	30,000	36,000	1400	1330	85
	I4553-2	\$ @ ●	F17T8/TL835/PLUS/ALTO	25	TL 835, 3500K	24	30,000	36,000	1400	1330	85
	I4554-0	\$ @ ●	F17T8/TL841/PLUS/ALTO	25	TL 841, 4100K	24	30,000	36,000	1400	1330	85
	I4555-7	\$ @ ●	F17T8/TL850/PLUS/ALTO	25	TL 850, 5000K	24	30,000	36,000	1325	1260	82
	38215-0	\$ @ ●	F17T8/TL865/PLUS/ALTO	25	TL 865, 6500K	24	30,000	36,000	1275	1210	82
25	I4556-5	\$ @ ●	F25T8/TL830/PLUS/ALTO	25	TL 830, 3000K	36	30,000	36,000	2225	2115	85
	I4557-3	\$ @ ●	F25T8/TL835/PLUS/ALTO	25	TL 835, 3500K	36	30,000	36,000	2225	2115	85
	I4558-1	\$ @ ●	F25T8/TL841/PLUS/ALTO	25	TL 841, 4100K	36	30,000	36,000	2225	2115	85
	I4559-9	\$ @ ●	F25T8/TL850/PLUS/ALTO	25	TL 850, 5000K	36	30,000	36,000	2150	2040	82
	38258-0	\$ @ ●	F25T8/TL865/PLUS/ALTO	25	TL 865, 6500K	36	30,000	36,000	2125	2000	82
32	36000-8	\$ @ ●	F32T8/TL830/PLUS/ALTO	25	TL 830, 3000K	48	30,000	36,000	2950	2800	85
	36001-6	\$ @ ●	F32T8/TL835/PLUS/ALTO	25	TL 835, 3500K	48	30,000	36,000	2950	2800	85
	36002-4	\$ @ ●	F32T8/TL841/PLUS/ALTO	25	TL 841, 4100K	48	30,000	36,000	2950	2800	85
	20277-0	\$ @ ● †	F32T8/TL841/PLUS/ALTO	10	TL 841, 4100K, 10 PK	48	30,000	36,000	2950	2800	85
	36003-2	\$ @ ●	F32T8/TL850/PLUS/ALTO	25	TL 850, 5000K	48	30,000	36,000	2850	2710	82
	38261-4	\$ @ ● ✗	F32T8/TL865/PLUS/ALTO	25	TL 865, 6500K	48	30,000	36,000	2750	2610	82

### PLUS 700 SERIES LONG LIFE T8 FLUORESCENT LAMPS

T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor

32	36004-0	\$ @ ● ✗	F32T8/TL730/PLUS/ALTO	25	TL 730, 3000K	48	30,000	36,000	2800	2660	78
	36005-7	\$ @ ● ✗	F32T8/TL735/PLUS/ALTO	25	TL 735, 3500K	48	30,000	36,000	2800	2660	78
	36013-1	\$ @ ● ✗	F32T8/TL741/PLUS/ALTO	25	TL 741, 4100K	48	30,000	36,000	2800	2660	78
	36014-9	\$ @ ● ✗	F32T8/TL750/PLUS/ALTO	25	TL 750, 5000K	48	30,000	36,000	2700	2550	78

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51

✗ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

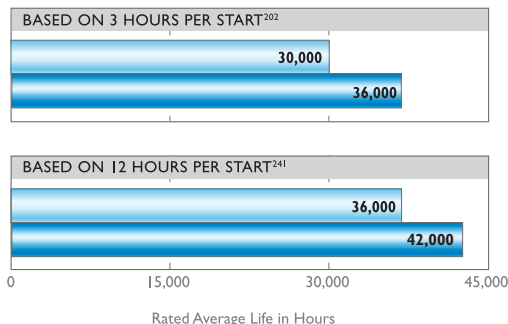
### PHILIPS PLUS 700 SERIES AND 800 SERIES T8

Warranty Period: 36 months\*

\* Certain limitations and conditions apply. See Philips for further warranty details.

### RATED AVERAGE LIFE

- Philips PLUS Instant Start Ballast
- Philips PLUS Programmed Start Ballast



T8 Medium Bipin

# FLUORESCENT LAMPS

## 800 Series T8 Lamps, 700 Series T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208, 239)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### 800 SERIES T8 FLUORESCENT LAMPS

#### T8 Medium Bipin Featuring ALTO II Technology

17	36791-2	\$ ●	F17T8/TL835/ALTO	25	TL 835, 3500K	24	24,000	30,000	1350	1280	85
	36793-8	\$ ●	F17T8/TL841/ALTO	25	TL 841, 4100K	24	24,000	30,000	1350	1280	85
	14123-4	\$ ●	F17T8/TL850/ALTO	25	TL 850, 5000K	24	24,000	30,000	1300	1235	82
25	36814-2	\$ ●	F25T8/TL835/ALTO	25	TL 835, 3500K	36	24,000	30,000	2150	2040	85
	36825-8	\$ ●	F25T8/TL841/ALTO	25	TL 841, 4100K	36	24,000	30,000	2150	2040	85
	14124-2	\$ ●	F25T8/TL850/ALTO	25	TL 850, 5000K	36	24,000	30,000	2150	2040	82
32	24667-8	\$ ④ ●	F32T8/TL830/ALTO	25	TL 830, 3000K	48	24,000	30,000	2850	2710	85
	24670-2	\$ ④ ●	F32T8/TL835/ALTO	25	TL 835, 3500K	48	24,000	30,000	2850	2710	85
	24671-0	\$ ④ ●	F32T8/TL841/ALTO	25	TL 841, 4100K	48	24,000	30,000	2850	2710	85
	27235-1	\$ ④ ●	F32T8/TL841/ALTO PLZ	1350	TL 841, 4100K	48	24,000	30,000	2850	2710	85
	27229-4	\$ ④ ●	F32T8/TL850/ALTO	25	TL 850, 5000K	48	24,000	30,000	2850	2710	82
40	36831-6	\$ ●	F40T8/TL830/ALTO	25	TL 830, 3000K	60	24,000	30,000	3725	3500	85
	36834-0	\$ ●	F40T8/TL835/ALTO	25	TL 835, 3500K	60	24,000	30,000	3725	3500	85
	36847-2	\$ ●	F40T8/TL841/ALTO	25	TL 841, 4100K	60	24,000	30,000	3725	3500	85
	20698-7	\$ ●	F40T8/TL850/ALTO	25	TL 850, 5000K	60	24,000	30,000	3600	3500	82

### 700 SERIES T8 FLUORESCENT LAMPS

#### T8 Medium Bipin Featuring ALTO II Technology

32	27252-6	\$ ④ ● ∅	F32T8/TL730/ALTO	25	TL 730, 3000K	48	24,000	30,000	2700	2565	78
	27249-2	\$ ④ ● ∅	F32T8/TL735/ALTO	25	TL 735, 3500K	48	24,000	30,000	2700	2565	78
	27259-1	\$ ④ ● ∅	F32T8/TL735/ALTO PLZ	1350	TL 735, 3500K	48	24,000	30,000	2700	2565	78
	27248-4	\$ ④ ● ∅	F32T8/TL741/ALTO	25	TL 741, 4100K	48	24,000	30,000	2700	2565	78
	38351-3	\$ ④ ● ∅	F32T8/TL741/ALTO	10	TL 741, 4100K, 10PK	48	24,000	30,000	2700	2565	78
	27255-9	\$ ④ ● ∅	F32T8/TL741/ALTO PLZ	1350	TL 741, 4100K	48	24,000	30,000	2700	2565	78
	27268-2	\$ ④ ● ∅	F32T8/TL750/ALTO	25	TL 750, 5000K	48	24,000	30,000	2600	2470	78

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51

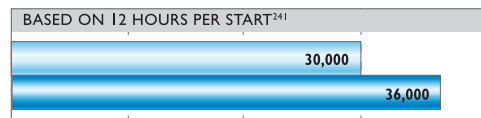
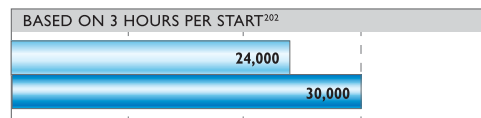
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

**PHILIPS 700 SERIES  
AND 800 SERIES T8**  
Warranty Period: 30 months\*

\* Certain limitations and conditions apply. See Philips for further warranty details.

### RATED AVERAGE LIFE

- Philips Universal Instant Start Ballast
- Philips Universal Programmed Start Ballast



T8 Medium Bipin

0 10,000 20,000 30,000 40,000  
Rated Average Life in Hours

# FLUORESCENT LAMPS

## T8 U-Bent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### ENERGY ADVANTAGE U-BENT 6" T8 FLUORESCENT LAMPS

#### T8 Medium Bipin with 6" Wide Spacing (212)

25	20420-6	\$●	FB32T8/ADV830/6/XEW/ALTO 25 WATT	20	TL 830, 3000K	22%	24,000	30,000	2400	2330	85
	20421-4	\$●	FB32T8/ADV835/6/XEW/ALTO 25 WATT	20	TL 835, 3500K	22%	24,000	30,000	2400	2330	85
	20423-0	\$●	FB32T8/ADV841/6/XEW/ALTO 25 WATT	20	TL 841, 4100K	22%	24,000	30,000	2400	2330	85
	20424-8	\$●	FB32T8/ADV850/6/XEW/ALTO 25 WATT	20	TL 850, 5000K	22%	24,000	30,000	2350	2280	82

### 800 SERIES U-BENT RAPID START T8 FLUORESCENT LAMPS

#### T8 Medium Bipin with 6" Wide Spacing (212)

32	37897-6	\$●	FB32T8/TL830/6/ALTO	20	TL 830, 3000K	22%	24,000	30,000	2800	2535	85
	37900-8	\$●	FB32T8/TL835/6/ALTO	20	TL 835, 3500K	22%	24,000	30,000	2800	2535	85
	37902-4	\$●	FB32T8/TL841/6/ALTO	20	TL 841, 4100K	22%	24,000	30,000	2800	2535	85
	37880-2	\$●	FB32T8/TL850/6/ALTO	20	TL 850, 5000K	22%	24,000	30,000	2700	2450	82

### 700 SERIES U-BENT RAPID START T8 FLUORESCENT LAMPS

#### T8 Medium Bipin with 6" Wide Spacing (212)

32	37892-7	\$●∅	FB32T8/TL730/6/ALTO	20	TL 730, 3000K	22%	20,000	24,000	2650	2370	78
	37893-5	\$●∅	FB32T8/TL735/6/ALTO	20	TL 735, 3500K	22%	20,000	24,000	2650	2370	78
	37894-3	\$●∅	FB32T8/TL741/6/ALTO	20	TL 741, 4100K	22%	20,000	24,000	2650	2370	78
	37882-8	\$●∅	FB32T8/TL750/6/ALTO	20	TL 750, 5000K	22%	20,000	24,000	2600	2325	78

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
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### ENERGY ADVANTAGE U-BENT 1 1/8" T8 FLUORESCENT LAMPS

#### T8 Medium Bipin with 1 1/8" Wide Spacing (212)

29	22675-3	●	FB29T8/TL830/EA/ALTO	15	TL 830, 3000K	22%	24,000	2600	2470	85
	22676-1	●	FB29T8/TL835/EA/ALTO	15	TL 835, 3500K	22%	24,000	2600	2470	85
	22677-9	●	FB29T8/TL841/EA/ALTO	15	TL 841, 4100K	22%	24,000	2600	2470	85

### 800 SERIES U-BENT 1 1/8" T8 FLUORESCENT LAMPS

#### T8 Medium Bipin with 1 1/8" Wide Spacing (212)

31	22671-2	●	FB31T8/TL830/ALTO	15	TL 830, 3000K	22%	24,000	2775	2636	85
	22672-0	●	FB31T8/TL835/ALTO	15	TL 835, 3500K	22%	24,000	2775	2636	85
	22674-6	●	FB31T8/TL841/ALTO	15	TL 841, 4100K	22%	24,000	2775	2636	85

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51

∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012



T8 U-Bent Lamp  
Medium Bipin



T8 U-Bent  
1 1/8" Lamp

#### PHILIPS STANDARD AND 1 1/8" U-BENT T8

Warranty Period: 24 months\*

#### PHILIPS ENERGY ADVANTAGE U-BENT T8

Warranty Period: 36 months\*

\* Certain limitations and conditions apply.  
See Philips for further warranty details.

# FLUORESCENT LAMPS

## Rapid Start T8 Lamps, Preheat T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### RAPID START T8 FLUORESCENT LAMPS

#### T8 Medium Bipin; High CRI

17	22154-9	\$	F17T8/TL950	25	TL 950, 5000K	24	20,000	20,000	910	850	98
25	22159-8	\$	F25T8/TL950	25	TL 950, 5000K	36	20,000	20,000	1550	1450	98
32	20904-9	\$	F32T8/TL930	25	TL 930, 3000K	48	20,000	20,000	2000	1860	95
	20905-6	\$	F32T8/TL950	25	TL 950, 5000K	48	20,000	20,000	2000	1860	98

### TL-D RAPID START T8 FLUORESCENT LAMPS—FOR OPERATION ON EUROPEAN BALLAST

#### T8 Medium Bipin; High CRI

36	29189-8		TLD36W/840NG	25	TL840, 4000K	48	20,000	—	3350	3100	82
58	29184-9		TLD58W/840NG	25	TL840, 4000K	60	20,000	—	5200	4300	82
70	29186-4		TLD70W/840NG	25	TL840, 4000K	72	20,000	—	6200	5100	82

### PREHEAT T8 FLUORESCENT LAMPS

#### T8 Medium Bipin Linear Fluorescent Lamps; Requires Use of Starters (202)

15	40720-5	†	F15T8D	25	Daylight, 6500K	18	7500	—	750	660	73
	40719-7	†	F15T8/CW	25	Cool White, 4100K	18	7500	—	870	765	59
	36436-4		F15T8/CW BULK	96	Cool White, 4100K	18	7500	—	850	750	59
	39226-6		F15T8/PLANT	6	Plant Lite, Sleeved	18	7500	—	410	N/A	N/A
30	23545-7	●†	F30T8/CW/ALTO	25	Cool White, 4100K	36	7500	—	2200	2000	59

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)  
Fluorescent symbols and footnotes located on page 51



T8 Medium Bipin



# FLUORESCENT LAMPS

## Slimline T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### ENERGY ADVANTAGE T8 SLIMLINE 8-FOOT FLUORESCENT LAMPS

T8 Single Pin; Featuring ALTO Lamp Technology; Instant Start

51	I6321-2	□ \$ ◎ ●	F96T8/ADV835/XEW/ALTO 51W	25	TL 835, 3500K	96	24,000	30,000	5300	4940	85
	I6331-1	□ \$ ◎ ●	F96T8/ADV841/XEW/ALTO 51W	25	TL 841, 4100K	96	24,000	30,000	5300	4940	85
	I6457-4	□ \$ ◎ ●	F96T8/ADV850/XEW/ALTO 51W	25	TL 850, 5000K	96	24,000	30,000	5200	4840	82

### PLUS SLIMLINE T8 8-FOOT FLUORESCENT LAMPS

T8 Single Pin; Featuring ALTO Lamp Technology; Instant Start

59	23684-4	□ \$ ◎ ●	F96T8/TL835/PLUS/ALTO	25	TL 835, 3500K	96	24,000	30,000	5900	5490	85
	23685-1	□ \$ ◎ ●	F96T8/TL841/PLUS/ALTO	25	TL 841, 4100K	96	24,000	30,000	5900	5490	85
	23686-9	□ \$ ◎ ●	F96T8/TL850/PLUS/ALTO	25	TL 850, 5000K	96	24,000	30,000	5780	5375	82
	23681-0	□ \$ ◎ ● ∅	F96T8/TL735/PLUS/ALTO	25	TL 735, 3500K	96	24,000	30,000	5700	5190	78
	23682-8	□ \$ ◎ ● ∅	F96T8/TL741/PLUS/ALTO	25	TL 741, 4100K	96	24,000	30,000	5700	5190	78

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)  
Fluorescent symbols and footnotes located on page 51

#### PHILIPS XEW SLIMLINE T8

Warranty Period: 30 months\*

#### PHILIPS PLUS SLIMLINE T8

Warranty Period: 24 months\*

\* Certain limitations and conditions apply.  
See Philips for further warranty details.

### PLUS SLIMLINE T8 8-FOOT COST OF OWNERSHIP SAVINGS

PLUS Slimline 8-foot T8 Fluorescent Lamps vs. Standard 8-foot T8 Lamps

#### General Overview

PLUS Slimline 8-foot T8 fluorescent lamps may provide up to 60% longer life than standard 8-foot T8 products. With an incremental cost as little as \$1.00 per lamp, benefits and financial impact can be significant.

#### Benefits

By using PLUS Slimline 8-foot T8 lamps, the lamp replacement and labor costs are extended by an extra 2 years on a facility that operates an average of 4000 hours per year. For example, a standard 8-foot T8 product, with a rated average life expectancy of 15,000 hours, will last nearly 4 years (15,000 hours rated average life / 4000 hours per year = 3¾ years).

Conversely, PLUS Slimline 8-foot T8 lamps will operate for 6 years due to their rated average life expectancy of 24,000 hours (24,000 hours rated average life / 4000 hours per year = 6 years).

#### Financial Impact

With the extended life expectancy of 2 years and the benefits of Philips exclusive TCLP-compliant low mercury technology, the positive financial impact of installing PLUS Slimline 8-foot T8 lamps may provide cost of ownership savings per lamp as follows:

Incremental Cost	\$ (1.00)
Material Cost Avoidance <sup>A</sup>	\$ 4.00
Labor Cost Avoidance <sup>B</sup>	\$ 3.72
Disposal Cost Avoidance <sup>C</sup>	\$ 0.72
<b>Cost of Ownership Savings</b>	<b>\$ 7.44</b>

**A** Material Cost Avoidance is the annualized acquisition cost per lamp (average cost per lamp of \$7.50 for standard 8-Foot T8 product / 3 3/4 years = \$2.00 per year). By installing PLUS Slimline 8-Foot T8 lamps, a material cost per lamp of \$4.00 is avoided due to the extra 2 years of life expectancy. Note that the average cost per lamp may vary.

**B** Labor Cost Avoidance is the annualized labor replacement cost per lamp (labor replacement cost per lamp of \$7.00 / 3 years = \$1.86 per year). By installing PLUS Slimline 8-Foot T8 lamps, a labor replacement cost per lamp of \$3.72 is avoided due to the extra 2 years life expectancy. Note that the labor replacement cost per lamp may vary.

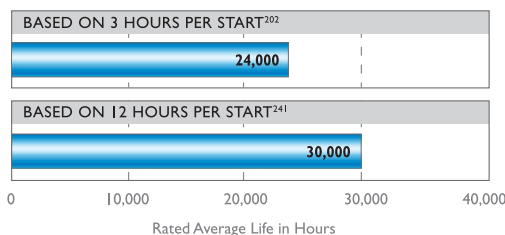
**C** Disposal Cost Avoidance is based on an average of \$.09 per foot for lamp recycling or \$.72 per 8-foot lamp. Philips Lighting Company encourages the recycling of all fluorescent lamps.



T8 Single Pin

### RATED AVERAGE LIFE

■ Philips PLUS Slimline T8



# FLUORESCENT LAMPS

## High Output T8 Lamps, Very High Output T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### PLUS HIGH OUTPUT (HO) T8 8-FOOT FLUORESCENT LAMPS

T8 Recessed D.C.; Featuring ALTO Lamp Technology

86	23687-7	☐ \$ ③ ●	F96T8/TL835/HO/PLUS/ALTO	25	TL 835, 3500K	96	24,000	30,000	8200	7625	85
	23688-5	☐ \$ ③ ●	F96T8/TL841/HO/PLUS/ALTO	25	TL 841, 4100K	96	24,000	30,000	8200	7625	85
	23689-3	☐ \$ ③ ●	F96T8/TL850/HO/PLUS/ALTO	25	TL 850 5000K	96	24,000	30,000	8100	7550	82

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
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### HIGH OUTPUT (HO) T8 FLUORESCENT LAMPS—4 FOOT, 5 FOOT & 6 FOOT

T8 Recessed D.C.; Featuring ALTO Lamp Technology

44	23679-4	☐ \$ ●	F48T8/TL841/HO/ALTO	25	TL 841, 4100K	48	18,000	4000	3600	85
55	41168-6	☐ \$ ● †	F60T8/TL841/HO/ALTO	25	TL 841, 4100K	60	18,000	5050	4545	85
65	23680-2	☐ \$ ●	F72T8/TL841/HO/ALTO	25	TL 841, 4100K	72	18,000	6100	5490	85

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### VERY HIGH OUTPUT-OUTDOOR (VHO-O) T8 EXTREME TEMPERATURE FLUORESCENT LAMPS

T8 Medium Bipin; Featuring ALTO Lamp Technology

84	40888-0	● †	F48T8/TL835/VHO-O/ALTO	25	TL 835, 3500K	48	30,000	40,000	7200	6840	85
	40889-8	● †	F48T8/TL841/VHO-O/ALTO	25	TL 841, 4100K	48	30,000	40,000	7200	6840	85
	40887-2	● †	F48T8/TL850/VHO-O/ALTO	25	TL 850, 5000K	48	30,000	40,000	6900	6550	82

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)  
Fluorescent symbols and footnotes located on page 51

**PHILIPS PLUS HIGH OUTPUT,  
HIGH OUTPUT AND  
VERY HIGH OUTPUT T8**  
Warranty Period: 24 months\*

\* Certain limitations and conditions apply.  
See Philips for further warranty details.



T8 Recessed DC



T8 Medium Bipin

# FLUORESCENT LAMPS

## Rapid Start T12 Lamps, T12 U-Bent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life		Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
							3 Hr. Start (202)	12 Hr. Start (241)			

### ADVANTAGE RAPID START ULTIMATE PERFORMANCE T12 FLUORESCENT LAMPS

#### T12 Medium Bipin

34	14258-8	● X	F34T12/ADV35/EW/ALTO	30	Advantage 35, T12, 3500K	48	24,000	30,000	3100	2945	85
	14259-6	● X	F34T12/ADV41/EW/ALTO	30	Advantage 41, T12, 4100K	48	24,000	30,000	3100	2945	82
	14260-4	● X	F34T12/ADV50/EW/ALTO	30	Advantage 50, T12, 5000K	48	24,000	30,000	3000	2845	82

### RAPID START "LONG LIFE" T12 FLUORESCENT LAMPS

#### T12 Medium Bipin

34	14251-3	● ∅	F34/CW/RS/EW/LL/ALTO	30	Cool White, 4100K	48	24,000	30,000	2650	2300	59
	14252-1	● ∅ X	F34/MW/RS/EW/LL/ALTO	30	Warm White, 3000K	48	24,000	30,000	2700	2350	49

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
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### RAPID START 800 SERIES T12 FLUORESCENT LAMPS

#### T12 Medium Bipin

34	14253-9	● ∅	F34T12/830/EW/ALTO	30	TL 830, 3000K	48	20,000	2800	2660	82
	14254-7	● ∅	F34T12/835/EW/ALTO	30	TL 835, 3500K	48	20,000	2800	2660	82
	14255-4	● ∅	F34T12/841/EW/ALTO	30	TL 841, 4100K	48	20,000	2800	2660	82
	14256-2	● ∅	F34T12/850/EW/ALTO	30	TL 850, 5000K	48	20,000	2800	2660	82

### RAPID START T12 FLUORESCENT LAMPS

#### T12 Medium Bipin

34	26659-3	● ●	F34/DX/RS/EW/ALTO	30	Daylight Deluxe, 6500K	48	20,000	2025	1775	90
	24470-7	● ● ∅	F34/CW/RS/EW/ALTO	30	Cool White, 4100K	48	20,000	2650	2300	59
	22046-7	● ● ∅	F34/CW/RS/EW/ALTO	10	Cool White, 4100K, 10PK	48	20,000	2650	2300	59
	25686-7	● ● ∅	F34/MW/RS/EW/ALTO	30	Warm White, 3000K	48	20,000	2575	2200	49

### U-BENT T12 FLUORESCENT LAMPS

#### T12 Medium Bipin

34	37872-9	● ● ∅	FB34/SPEC35/6/EW/ALTO	12	SPEC35, 3500K	22 $\frac{1}{2}$	18,000	2760	2500	73
	37874-5	● ● ∅	FB34/SPEC41/6/EW/ALTO	12	SPEC41, 4100K	22 $\frac{1}{2}$	18,000	2760	2500	70
	37863-8	● ∅	FB34/CW/6/EW/ALTO	12	Cool White, 4100K	22 $\frac{1}{2}$	18,000	2400	2050	59
	37862-0	● ∅	FB34/MW/6/EW/ALTO	12	Warm White, 3000K	22 $\frac{1}{2}$	18,000	2400	2050	49

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51

∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012



T12 Medium Bipin



T12 U-Bent  
Medium Bipin

# FLUORESCENT LAMPS

## TuffGuard Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Color Temp. (K)	Nom. Length (In.)	Rated Avg. Life (Hrs.)(241)	Approx. Initial Lumens (203,204)	CRI	Availability
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### TUFFGUARD T8 FLUORESCENT COATED LAMPS CONTINUED

#### T8 Medium Bipin Linear Fluorescent Lamps

28	I6966-4	● †	F32T8/ADV830/EW/ALTO 28W TG	25	3000	48	36,000	2725	85	Stocked
	I6958-1	● †	F32T8/ADV835/EW/ALTO 28W TG	25	3500	48	36,000	2725	85	Stocked
	I6959-9	● †	F32T8/ADV841/EW/ALTO 28W TG	25	4100	48	36,000	2725	85	Stocked
	I6965-6	● †	F32T8/ADV850/EW/ALTO 28W TG	25	5000	48	36,000	2675	82	Stocked
32	I6863-3	●	F32T8/ADV830/ALTO TG	25	3000	48	30,000	3100	85	Made to Order
	I6502-7	●	F32T8/ADV850/ALTO TG	25	5000	48	30,000	3000	82	Made to Order
	I6682-7	●	F32T8/ADV850/XEW/ALTO TG	25	5000	48	30,000	2400	82	Made to Order
	I6894-8		F32T8/TL950 TG	25	5000	48	20,000	2000	98	Made to Order
	I6508-4	● ∅	F32T8/TL730/ALTO TG	25	3000	48	30,000	2700	78	Made to Order
	20428-9	● ∅	F32T8/TL735/ALTO TG	25	3500	48	30,000	2700	78	Stocked
	I6484-8	● ∅	F32T8/TL741/ALTO TG	25	4100	48	30,000	2700	78	Stocked
	I6619-9	● ∅	F32T8/TL750/ALTO TG	25	5000	48	30,000	2600	78	Made to Order
	I6541-5	●	F32T8/TL830/ALTO TG	25	3000	48	30,000	2850	85	Stocked
	I6488-9	●	F32T8/TL835/ALTO TG	25	3500	48	30,000	2850	85	Stocked
	I6487-1	●	F32T8/TL841/ALTO TG	25	4100	48	30,000	2850	85	Made to Order
	I6503-5	●	F32T8/TL850/ALTO TG	25	5000	48	30,000	2850	82	Made to Order
	I6791-6	●	F32T8/TL865/PLUS/ALTO TG	25	6500	48	36,000	2750	82	Made to Order
	I6308-9	●	F32T8/ADV841/ALTO TG	25	4100	48	30,000	3150	85	Stocked
	I6246-1	● ∅	F32T8/TL730/PLUS/ALTO TG	25	3000	48	36,000	2800	78	Stocked
	I6239-6	● ∅	F32T8/TL735/PLUS/ALTO TG	25	3500	48	36,000	2800	78	Stocked
	I6078-8	● ∅	F32T8/TL741/PLUS/ALTO TG	25	4100	48	36,000	2800	78	Stocked
	I6318-8	● ∅	F32T8/TL750/PLUS/ALTO TG	25	5000	48	36,000	2700	78	Stocked
	I6275-0	●	F32T8/TL830/PLUS/ALTO TG	25	3000	48	36,000	2950	85	Stocked
	I6238-8	●	F32T8/TL835/PLUS/ALTO TG	25	3500	48	36,000	2950	85	Stocked
I6295-8	●	F32T8/TL841/XLL/ALTO TG	25	4100	48	40,000	2950	85	Stocked	
I6274-3	●	F32T8/TL841/PLUS/ALTO TG	25	4100	48	36,000	2950	85	Stocked	
I6292-5	●	F32T8/TL850/PLUS/ALTO TG	25	5000	48	36,000	2850	82	Stocked	
40	I6323-8	●	F40T8/TL835/ALTO TG	25	3500	60	36,000	3725	85	Stocked
	I6439-2	●	F40T8/TL841/ALTO TG	25	4100	60	36,000	3725	85	Stocked
44	40905-2	● †	F48T8/TL841/HO/ALTO TG	25	4100	48	18,000	4000	85	Made to Order
51	41315-3	● †	F96T8/ADV835/XEW/ALTO 51W TG	25	3500	96	30,000	5300	85	Stocked
	41314-6	● †	F96T8/ADV841/XEW/ALTO 51W TG	25	4100	96	30,000	5300	85	Stocked
	41313-8	● †	F96T8/ADV850/XEW/ALTO 51W TG	25	5000	96	30,000	5200	82	Stocked
59	40906-0	● † ∅	F96T8/TL735/PLUS/ALTO TG	25	3500	96	30,000	5700	78	Stocked
	40907-8	● † ∅	F96T8/TL741/PLUS/ALTO TG	25	4100	96	30,000	5700	78	Made to Order
	40908-6	● †	F96T8/TL835/PLUS/ALTO TG	25	3500	96	30,000	5900	85	Made to Order
	40909-4	● †	F96T8/TL841/PLUS/ALTO TG	25	4100	96	30,000	5900	85	Made to Order
	40910-2	● †	F96T8/TL850/PLUS/ALTO TG	25	5000	96	30,000	5780	82	Stocked
86	40911-0	● †	F96T8/TL835/HO/PLUS/ALTO TG	25	3500	96	30,000	8200	85	Made to Order
	40912-8	● †	F96T8/TL841/HO/PLUS/ALTO TG	25	4100	96	30,000	8200	85	Stocked
	40913-6	● †	F96T8/TL850/HO/PLUS/ALTO	25	5000	96	30,000	8100	82	Stocked

Note: Made to order products require a 3 week lead time.

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51



T8 Medium Bipin

# FLUORESCENT LAMPS

## TuffGuard Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Color Temp. (K)	Nom. Length (In.)	Rated Avg. Life (Hrs.)(202)	Approx. Initial Lumens (203,204)	CRI	Availability
<b>TUFFGUARD T12 FLUORESCENT COATED LAMPS</b>										
<b>T12 Medium Bipin Linear Fluorescent Lamps</b>										
14	16792-4		F14T12/CWTG	30	4100	15	9000	710	59	Made to Order
15	16687-6		F15T12/CWTG	30	4100	18	9000	800	59	Made to Order
20	16919-3	●	F20T12/D/ALTO TG	30	6500	24	9000	1075	73	Made to Order
	16300-6	●	F20T12/CW/ALTO TG	30	4100	24	9000	1200	59	Stocked
25	16729-6		F25T12/CWTG	30	4100	36	7500	1900	59	Made to Order
30	16893-0	●	F30T12/D/RS/ALTO TG	30	6500	36	24,000	1950	73	Made to Order
	16310-5	●	F30T12/CW/RS/ALTO TG	30	4100	36	24,000	2250	59	Stocked
	16742-9	●	F48T12/CW/EW/ALTO TG	15	4100	48	9000	2400	59	Made to Order
34	16032-5	●∅	F34/CW/RS/EW/LL/ALTO TG	30	4100	48	24,000	2650	59	Stocked
	16060-6	●∅	F34T12/CW/RS/EW/ALTO TG	30	4100	48	20,000	2650	59	Stocked
	16315-4	●∅	F34T12/WW/RS/EW/ALTO TG	30	3000	48	20,000	2575	49	Stocked
	16759-3	●∅	F34T12/835/EW/ALTO TG	30	3500	48	20,000	2800	82	Made to Order
	16764-3	●∅	F34T12/841/EW/ALTO TG	30	4100	48	20,000	2800	82	Made to Order
	16743-7	●X	F34T12/ADV850/EW/ALTO TG	30	5000	48	24,000	3000	82	Made to Order
	16693-4	●	F34T12/DX/RS/EW/ALTO TG	30	6500	48	20,000	2025	90	Made to Order
39	16309-7	●	F48T12/CW/ALTO TG	30	4100	48	9000	2950	59	Stocked
	16307-1	●	F48T12/D/ALTO TG	15	6500	48	9000	2500	73	Stocked
40	16736-1	●∅	F40T12/830/ALTO TG	30	3000	48	20,000	3200	82	Made to Order
	16314-7		F40C50 TG	30	5000	48	20,000	2200	92	Stocked
	16299-0	●	F40DX/ALTO TG	30	6500	48	20,000	2325	90	Stocked
	16311-3	●∅	F40T12/835/ALTO TG	30	3500	48	20,000	3200	82	Stocked
	16322-0	●∅	F40T12/841/ALTO TG	30	4100	48	20,000	3200	82	Stocked
	16744-5	●∅	F40T12/ADV835/ALTO TG	30	3500	48	24,000	3450	85	Made to Order
	16918-5	●∅	F40T12/ADV841/ALTO TG	30	4100	48	24,000	3450	85	Made to Order
	16886-4	●∅	F40T12/ADV850/ALTO TG	30	5000	48	24,000	3300	82	Made to Order
	16890-6		F40T12/C75 TG	30	7500	48	20,000	2000	95	Made to Order
	20427-1	●∅	F40T12/CW/ALTO TG	30	4100	48	20,000	2650	59	Stocked
	16677-7	●	F40T12/CWX/ALTO TG	30	4200	48	20,000	2550	89	Made to Order
56	16689-2	●	F72T12/CW/ALTO TG	15	4100	72	12,000	4450	59	Made to Order
	16924-3	●	F72T12/D/ALTO TG	15	6500	72	12,000	3800	73	Made to Order

Note: Made to order products require a 3 week lead time.

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51



T12 Medium Bipin

# FLUORESCENT LAMPS

## Consumer Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
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### T5 FLUORESCENT LAMPS

#### Blister-Carded Linear Fluorescent Lamps; Miniature Bipin

4	39218-3		F4T5/SOFT WHITE	12/1	3000K	6	6000	150	120	85
6	39219-1		F6T5/SOFT WHITE	12/1	3000K	9	7500	325	260	85
8	39220-9		F8T5/SOFT WHITE	12/1	3000K	12	7500	450	360	85
	39114-4		F8T5/COOL WHITE PLUS	12/1	4100K	12	7500	400	300	59
	15756-0	†	F8T5/BLB UPC	25/1	—	12	7500	—	—	—
13	39221-7		F13T5/SOFT WHITE	12/1	3000K	21	7500	1000	800	85
	40974-8	†	F13T5/Cool White	12/1	4100K	21	7500	820	660	59

### T5 FLUORESCENT LAMPS

28	20613-6	●	F28T5/TL835 ALTO UPC 15/1	15	TL835, 3500K	46	20,000	2900	2750	85
	40963-1	●†	F28T5/TL841 ALTO UPC 15/1	15	TL841, 4100K	46	25,000	2900	2750	85

### T8 FLUORESCENT LAMPS

#### T8 Medium Bipin Linear Fluorescent Lamps

15	39212-6	●	F15T8/Soft White	1	3000K Individually Sleeved	18	7500	1000	900	85
	39207-6	●	F15T8/Cool White Plus	1	4100K Individually Sleeved	18	7500	870	765	59
	39108-6	●	F15T8/Cool White Plus	1	4100K Individually Sleeved	24	7500	1175	1035	59
	39226-6		F15T8/Plant	1	Individually Sleeved	18	7500	410	—	—
	15760-2	†	F15T8/Blacklight	6/1	Individually Sleeved	18	7500	—	—	—
17	16069-0	●	F17T8/Soft White UPC	25	3000K 25 Pk Case	24	20,000	1400	1300	85
30	39216-7	●	F30T8/Soft White	6/1	3000K Individually Sleeved	36	7500	2500	2250	85
	23442-7	●†	F30T8/CW ALTO UPC	25	4100K Individually Sleeved	36	7500	2200	1760	59
32	40943-3	●†	F32T8/SOFT WHITE ALTO	10	3000K 10 Pk Case	48	24,000	2950	2800	85
	20545-0	●∅	F32T8/TL735 ALTO 10PK	10	3500K 10 Pk Case	48	24,000	2700	2565	78
	40944-1	●†∅	F32T8/TL741/ALTO TG	10	Safety Coated 4100K 10 Pk	48	24,000	2700	2565	78
	38351-3	●∅	F32T8/TL741 ALTO 10PK	10	4100K 10 Pk Case	48	24,000	2700	2565	78
	15238-9	●†	F32T8/ADV841/XEW/ALTO 25W	10	4100K 10 Pk Case	48	30,000	2500	2425	85
	20278-8	●	F32T8/TL841/XLL/ALTO 10PK	10	4100K 10 Pk Case	48	36,000	2950	2800	85
	20504-7	●	F32T8/TL850 ALTO 10PK	10	5000K 10 Pk Case	48	24,000	2850	2710	82
	15235-5	●∅	F32T8/TL865/PLUS/ALTO 10PK	10	6500K 10 Pk Case	48	24,000	2750	2610	82
	40927-6	●†∅	F32T8/TL735/ALTO	25	3500K 25 Pk Case	48	24,000	2700	2565	78
	40925-0	●†∅	F32T8/TL741/ALTO	25	4100K 25 Pk Case	48	24,000	2700	2565	78
	40926-8	●†	F32T8/TL850/ALTO	25	5000K 25 Pk Case	48	24,000	2850	2710	82
	40940-9	●†∅	F32T8/DAYLIGHT DELUXE/ALTO	25	6500K 25 Pk Case	48	24,000	2750	2610	82
	40966-4	●†	F32T8/TL850/ALTO	15/2	5000K 2 Pk	48	24,000	2850	2710	82
	22682-9	●	F32T8/SOFT WHITE /ALTO 36/2	36/2	3000K 2 Pk	48	24,000	2950	2800	84
	22679-5	∅	F32T8/COOL WHITE PLUS 36/2	36/2	4100K 2 Pk	48	24,000	2800	2660	78
22681-1	●∅	F32T8/DAYLIGHT DELX/ALTO 36/2	36/2	6500K 2 Pk	48	24,000	2750	2610	82	

For the most current product information, go to the e-catalog on [www.philips.com](http://www.philips.com)

Fluorescent symbols and footnotes located on page 51

∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012



T5 Medium Bipin

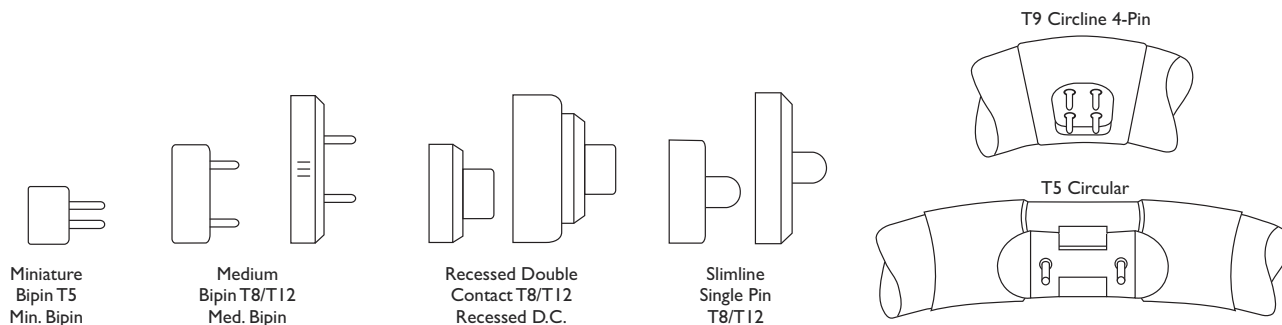


T8 Medium Bipin

# FLUORESCENT LAMPS

## Base Types and Bulb Shapes

### Base Types (Not Actual Sizes)



### Bulb Shapes (Not Actual Sizes)

The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb, while the number indicates the diameter of the bulb in eighths of an inch. For example, "T12" indicates a tubular shaped bulb having a diameter of  $1\frac{1}{2}$  or  $1\frac{1}{2}$  inches. The following illustrations show some of the more popular bulb shapes and sizes.

