

Alto[®] PLUS T8

Long Life Fluorescent Lamps

Featuring HI-VISION™ Phosphor
Environmentally responsible high performing lamps



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Ideal for...

- All environmentally responsible and energy efficient fluorescent applications
- ESCO lighting projects where long life lamps reduce cost of ownership



* Green End-Caps are a registered trademark of Philips Electronics North America Corporation.

Long Life

- **ALTO Advantage PLUS delivers 24,000 hours of rated life**

A 20% increase over standard T8 lamps

Performance Enhancement

- **Outstanding Lumen Maintenance**

-HI-VISION™ Phosphor delivers 95% lumen maintenance in both TL70 and TL80 lamps
-HI-VISION Phosphor, combined with Philips exclusive Cathode Guard, ensures superior lumen maintenance throughout lamp life and reduces lamp-end blackening

- **Enhanced CRI**

-86 CRI on TL80 T8 lamps
-78 CRI on TL70 T8 lamps

- **Reduced Cost of Ownership**

-T8 lamps with Electronic Ballasts
-Lower energy costs by 40% and provide light output equal to electromagnetic T12 systems
-20% Longer Life than standard lamps

Environmentally Responsible

- **Low-Mercury, TCLP Compliant**

Reduction in mercury content of more than 66% when compared to the 1999 industry average

- **Green End-Caps[®]***

Allow for product differentiation at time of purchase and at end of lamp life

- **Broadest Line**

Offers the broadest product line of TCLP compliant fluorescent lamps on the market

Philips
Lighting
Company



PHILIPS

Let's make things better.

Philips ALTO® PLUS T8 Fluorescent Long Life Lamps, featuring HI-VISION™ Phosphor

Electrical, Technical and Ordering Data (Subject to change without notice)

Product Number	Ordering Code	Nominal Watts	Bulb	Base	Standard Package Quantity	Color Temperature (Kelvin)	Color Rendering Index (CRI)	Lumen Maintenance	Nominal Length (In.)	Rated Average Life (Hrs.) ⁽¹⁾	Approx. Initial Lumens	Design Lumens ⁽²⁾
36000-8	F32T8/TL830PLUS/ALTO	32	T8	Med. Bipin	25	3000	86	95%	48	24,000	2950	2800
36001-6	F32T8/TL835PLUS/ALTO	32	T8	Med. Bipin	25	3500	86	95%	48	24,000	2950	2800
36002-4	F32T8/TL841PLUS/ALTO	32	T8	Med. Bipin	25	4100	86	95%	48	24,000	2950	2800
36003-2	F32T8/TL850PLUS/ALTO	32	T8	Med. Bipin	25	5000	86	95%	48	24,000	2950	2800
36004-0	F32T8/TL730PLUS/ALTO	32	T8	Med. Bipin	25	3000	78	95%	48	24,000	2850	2710
36005-7	F32T8/TL735PLUS/ALTO	32	T8	Med. Bipin	25	3500	78	95%	48	24,000	2850	2710
36013-1	F32T8/TL741PLUS/ALTO	32	T8	Med. Bipin	25	4100	78	95%	48	24,000	2850	2710
36014-9	F32T8/TL750PLUS/ALTO	32	T8	Med. Bipin	25	5000	78	95%	48	24,000	2850	2710

Features ALTO® Lamp Technology.

⁽¹⁾ Average life under specified test conditions with lamps turned off and restarted once every three operating hours.

⁽²⁾ Approximate lumens at 40% of rated average life.

Cost of Ownership Savings

ALTO® PLUS T8 Long Life Lamps vs Standard T8 Lamps

General Overview (4' Lamps)

ALTO PLUS T8 long life lamps provide 20% longer life than standard T8 products. With an incremental cost as little as \$.75 per lamp, the benefits and financial impact can be significant.

Benefits

By using ALTO PLUS T8 long life lamps, the lamp replacement and labor costs are extended by an extra year on a facility that operates an average of 4,000 hours per year.

For example, a standard T8 product, with a rated average life expectancy of 20,000 hours, will last 5 years (20,000 hours rated average life / 4,000 hours per year = 5 years). Conversely, ALTO PLUS T8 long life lamps will operate for 6 years due to their rated average life expectancy of 24,000 (24,000 hours rated average life / 4,000 hours per year = 6 years).

Financial Impact

With the extended life expectancy of 1 year, combined with the benefits of Philips' exclusive ALTO TCLP-compliant, low mercury technology, the positive financial impact of installing ALTO PLUS T8 long life lamps will provide cost of ownership savings per lamp as follows:

Incremental Cost	(\$.75)
Material Cost Avoidance ¹	\$.50
Labor Cost Avoidance ²	\$.89
Disposal Cost Avoidance ³	\$.36
Cost of Ownership Savings	\$ 1.00

ALTO® PLUS Fluorescent Long Life Lamps T8 Lamp Specification

"Lamps shall be Philips ALTO Fluorescent Lamps having:

- Credentials that pass the Environmental Protection Agency's TCLP test (Toxic Characteristic Leaching Procedure) established in 1990
- Distinguished by green end caps and a green label on the outer carton
- Color temperature of ___K (3000, 3500, 4100 or 5000)
- Color rendering index of ___ (78, 86)
- Featuring HI-VISION™ Phosphor
- T-8 diameter bulb
- Medium bi-pin bases
- Initial lumens of ___ (2850, 2950)
- Nominal wattage of 32
- A cathode guard.
- Rated average life of 24,000."

1 Material Cost Avoidance is the annualized acquisition cost per lamp (average cost per lamp of \$2.50 for standard T8 product / 5 years = \$.50 per year). By installing ALTO PLUS T8 lamps, a material cost per lamp of \$.50 is avoided in the sixth year due to the extra year of life expectancy. Note that the average cost per lamp may vary.

2 Labor Cost Avoidance is the annualized labor replacement cost per lamp (labor replacement cost per lamp of \$4.45 / 5 years = \$.89 per year). By installing ALTO PLUS T8 lamps, a labor replacement cost per lamp of \$.89 is avoided in the sixth year due to the extra year of life expectancy. Note that the labor replacement cost per lamp may vary. Source: National Lighting Bureau Guide to Office Lighting and Productivity.

3 Disposal Cost Avoidance is based on an average of \$.09 per ft. for lamp recycling or \$.36 per 4-ft. lamp. Philips Lighting Company encourages the recycling of all fluorescent lamps.

