

Alto® Universal T8 Fluorescent Lamps

Featuring Full Rated Life on all T8 Ballast Types*

*Instant Start, Rapid Start, Programmed Start, and Hybrid ballasts



Ideal for ...

Any lighting application requiring maximum quality of light and maintained light output.



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**Philips
Lighting
Company**



NEW!
Philips Exclusive!
The first T8 that delivers
full rated life on Instant
Start ballasts!

■ Reduced Cost-of-Ownership

- 33% longer life on Instant Start ballasts
- Pair T8 lamps with electronic ballasts
- Lower energy costs by 40% and provide light output equal to electromagnetic T12 systems

■ 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 TL80 T8 lamps
- 78 CRI TL70 T8 lamps

■ ALTO® Advantage™ and ALTO PLUS deliver 24,000 hours of rated life

- A 20% increase over standard T8 lamps
- ALTO® Advantage lamps deliver 10% more lumens than standard T8 lamps

■ 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



PHILIPS

Let's make things better.

ALTO® Universal T8 Fluorescent Lamps (Featuring Full Rated Life on all T8 Ballast Types*)

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

Product Number	Ordering Code	Package Quantity	Description	Nominal Length (In.)	Rated Life (Hrs.) ⁽¹⁾		Initial Lumens	Approx. Design Lumens ⁽²⁾	CRI	Lumen Maintenance
046677-					Instant Start	Rapid Start				
Advantage™ Ultimate Performance Lamps / T8 Medium Bi-pin featuring HI-VISION® Phosphor 24,000 Hour										
27064-5	F32T8/ADV830/ALTO	25	Advantage T8, 3000K	48	24,000	24,000	3100	2950	86	95%
27065-2	F32T8/ADV835/ALTO	25	Advantage T8, 3500K	48	24,000	24,000	3100	2950	86	95%
27066-0	F32T8/ADV841/ALTO	25	Advantage T8, 4100K	48	24,000	24,000	3100	2950	86	95%
27068-6	F32T8/ADV850/ALTO	25	Advantage T8, 5000K	48	24,000	24,000	3100	2950	86	95%
Long Life PLUS Fluorescent Lamps / T8 Medium Bi-pin featuring HI-VISION Phosphor 24,000 Hour										
36000-8	F32T8/TL830PLUS/ALTO	25	TL 80, 3000K, Long Life	48	24,000	24,000	2950	2800	86	95%
36001-6	F32T8/TL835PLUS/ALTO	25	TL 80, 3500K, Long Life	48	24,000	24,000	2950	2800	86	95%
36002-4	F32T8/TL841PLUS/ALTO	25	TL 80, 4100K, Long Life	48	24,000	24,000	2950	2800	86	95%
36003-2	F32T8/TL850PLUS/ALTO	25	TL 80, 5000K, Long Life	48	24,000	24,000	2950	2800	86	95%
38261-4	F32T8/TL865PLUS/ALTO	25	TL 80, 6500K, Long Life	48	24,000	24,000	2850	2710	86	95%
36004-0	F32T8/TL730PLUS/ALTO	25	TL 70, 3000K, Long Life	48	24,000	24,000	2850	2710	78	95%
36005-7	F32T8/TL735PLUS/ALTO	25	TL 70, 3500K, Long Life	48	24,000	24,000	2850	2710	78	95%
36013-1	F32T8/TL741PLUS/ALTO	25	TL 70, 4100K, Long Life	48	24,000	24,000	2850	2710	78	95%
36014-9	F32T8/TL750PLUS/ALTO	25	TL 70, 5000K, Long Life	48	24,000	24,000	2850	2710	78	95%
TL80 Fluorescent Lamps / T8 Medium Bi-pin featuring HI-VISION Phosphor										
24667-8	F32T8/TL830/ALTO	25	TL 80, 3000K	48	20,000	20,000	2950	2800	86	95%
24670-2	F32T8/TL835/ALTO	25	TL 80, 3500K	48	20,000	20,000	2950	2800	86	95%
24671-0	F32T8/TL841/ALTO	25	TL 80, 4100K	48	20,000	20,000	2950	2800	86	95%
27229-4	F32T8/TL850/ALTO	25	TL 80, 5000K	48	20,000	20,000	2950	2800	86	95%
TL70 Fluorescent Lamps / T8 Medium Bi-pin featuring HI-VISION Phosphor										
27252-6	F32T8/TL730/ALTO	25	TL 70, 3000K	48	20,000	20,000	2850	2710	78	95%
27249-2	F32T8/TL735/ALTO	25	TL 70, 3500K	48	20,000	20,000	2850	2710	78	95%
27248-4	F32T8/TL741/ALTO	25	TL 70, 4100K	48	20,000	20,000	2850	2710	78	95%
27268-2	F32T8/TL750/ALTO	25	TL 70, 5000K	48	20,000	20,000	2750	2550	78	95%

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 Universal 4-Ft. T8 Lamps vs. Standard 4-Ft. T8 Lamps

General Overview

ALTO Universal T8 lamps provide 33% longer life than standard T8 products on Instant Start Ballasts. With no incremental cost, the benefits and financial impact can be significant.

Benefits

By using ALTO Universal T8 lamps, the lamp replacement and labor costs are extended by an extra 15 months on a facility that operates an average of 4,000 hours per year. For example, current T8 products, with a rated average life expectancy of 15,000 hours on Instant Start ballasts, will last 3 years and 9 months. Conversely, ALTO Universal T8 lamps will operate for 5 years due to their rated average life expectancy of 20,000 hours on Instant Start ballasts.

Financial Impact

With the extended life expectancy of 15 months, combined with the benefits of Philips' exclusive ALTO TCLP-compliant, low mercury technology, the positive financial impact of installing ALTO Universal T8 lamps will provide cost of ownership savings per lamp as follows:

Incremental Cost	(\$.00)
Material Cost Avoidance ^A	\$.62
Labor Cost Avoidance ^B	\$ 1.11
Disposal Cost Avoidance ^C	\$.36
Cost of Ownership Savings	\$ 2.09

A 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.

B 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.

C 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.

ALTO Universal T8 Fluorescent Lamps Featuring Full Rated Life on all T8 Ballast Types*—Lamp Specification

Lamps shall be Philips HI-VISION™ T8 Lamps having:

- Full rated life on Instant Start, Rapid Start, Programmed Start and Hybrid ballasts
- Color rendering index of (78 or 86)
- T8 diameter bulb
- Medium bi-pin bases
- Color temperature of _____K (3000, 3500, 4100, 5000, and 6500)
- Initial lumens of (2750–3100)
- Design lumens of (2550–2950)
- Nominal wattage of 32
- A cathode guard
- Featuring HI-VISION Phosphor.