

PENTRON® ECOLOGIC®

T5 Linear Fluorescent Lamps



PENTRON ECOLOGIC T5 lamps offer a high quality lighting solution for linear fluorescent applications where luminaire design flexibility is important. These lamps are available in 2, 3, 4 and 5-foot lengths and offer a wide range of color temperatures: 2700K, 3000K, 3500K, 4100K, 5000K and 6500K. When paired with a QUICKTRONIC® T5 ballast, these systems are covered by the comprehensive QUICK 60+® system warranty.

Key Features & Benefits

- High Performance T5 lamps
 - Up to 104 LPW
 - 95% lumen maintenance
 - Peak lumen output at 35°C (95°F)
 - Dimmable
 - Ideal for occupancy sensor applications
- Lead free glass
- Greater luminaire design flexibility
- Nominal 2', 3', 4', and 5'
- QUICK 60+ system warranty offered when paired with QUICKTRONIC T5 electronic ballast
- Up to 36,000 hours lamp life
- TCLP and RoHS compliant
- Made in the USA

ECOLOGIC® is a comprehensive program of OSRAM SYLVANIA focused on addressing environmental issues at all stages of lamp life.

* Regulations may vary. Check your local and state regulations.



This light source meets restrictions on hazardous substances.



Product Offering

Ordering Abbreviation	Watts	CCT
FP14/800/ECO	14	2700K, 3000K, 3500K, 4100K, 6500K
FP21/800/ECO	21	2700K, 3000K, 3500K, 4100K, 6500K
FP28/800/ECO	28	2700K, 3000K, 3500K, 4100K, 5000K, 6500K
FP35/800/ECO	35	2700K, 3000K, 3500K, 4100K

Application Information

Applications

- Cove and valance
- Direct / indirect luminaires
- Facade luminaires
- Low profile surface mount
- Shallow recessed fixtures
- Showcase
- Signage

Application Notes

1. PENTRON ECO lamps are about 2" shorter than T8 & T12 Bi-Pin lamps.
2. Miniature Bi-Pin bases will not install into T8 & T12 sockets.
3. Miniature Bi-Pin bases require UL Listed 600 Volt rated sockets.
4. Requires high frequency programmed rapid start electronic ballasts for T5s equipped with end-of-life sensing circuit.
5. PENTRON ECO operates at same current for uniform color and brightness between nominal 2', 3', 4', and 5' lengths.
6. Apply thermal factor in calculations for use in exterior or unheated applications.



Specification Data

Fixture Description:

Type

Project/Job:

SYLVANIA lamp:

SYLVANIA ballast:

Notes:

Ordering Information

Item Number	Ordering Abbreviation	Base	Watt	Nominal Length (in)	Initial Lumens @ 25°C	Mean Lumens @ 25°C	Initial Lumens @ 35°C	Mean Lumens @ 35°C	Programmed 3 hrs/start	Rapid Start 12 hrs/start	CCT	CRI
20973	FP14/827/ECO	Miniature Bi-Pin	14	24	1,200	1,140	1,350	1,285	25,000	28,000	2700K	85
20907	FP14/830/ECO	Miniature Bi-Pin	14	24	1,200	1,140	1,350	1,285	25,000	28,000	3000K	85
20908	FP14/835/ECO	Miniature Bi-Pin	14	24	1,200	1,140	1,350	1,285	25,000	28,000	3500K	85
20914	FP14/841/ECO	Miniature Bi-Pin	14	24	1,200	1,140	1,350	1,285	25,000	28,000	4100K	85
20988	FP14/865/ECO	Miniature Bi-Pin	14	24	1,100	1,045	1,300	1,235	25,000	28,000	6500K	85
20974	FP21/827/ECO	Miniature Bi-Pin	21	36	1,900	1,805	2,100	1,995	25,000	28,000	2700K	85
20919	FP21/830/ECO	Miniature Bi-Pin	21	36	1,900	1,805	2,100	1,995	25,000	28,000	3000K	85
20921	FP21/835/ECO	Miniature Bi-Pin	21	36	1,900	1,805	2,100	1,995	25,000	28,000	3500K	85
20924	FP21/841/ECO	Miniature Bi-Pin	21	36	1,900	1,805	2,100	1,995	25,000	28,000	4100K	85
20989	FP21/865/ECO	Miniature Bi-Pin	21	36	1,750	1,665	2,000	1,900	25,000	28,000	6500K	85
20975	FP28/827/ECO	Miniature Bi-Pin	28	48	2,600	2,470	2,900	2,755	30,000	36,000	2700K	85
20868	FP28/830/ECO	Miniature Bi-Pin	28	48	2,600	2,470	2,900	2,755	30,000	36,000	3000K	85
20901	FP28/835/ECO	Miniature Bi-Pin	28	48	2,600	2,470	2,900	2,755	30,000	36,000	3500K	85
20902	FP28/841/ECO	Miniature Bi-Pin	28	48	2,600	2,470	2,900	2,755	30,000	36,000	4100K	85
22203	FP28/850/ECO	Miniature Bi-Pin	28	48	2,545	2,420	2,840	2,700	30,000	36,000	5000K	85
20990	FP28/865/ECO	Miniature Bi-Pin	28	48	2,400	2,280	2,750	2,615	30,000	36,000	6500K	85
20870	FP35/827/ECO	Miniature Bi-Pin	35	60	3,300	3,135	3,650	3,470	25,000	28,000	2700K	85
20925	FP35/830/ECO	Miniature Bi-Pin	35	60	3,300	3,135	3,650	3,470	25,000	28,000	3000K	85
20926	FP35/835/ECO	Miniature Bi-Pin	35	60	3,300	3,135	3,650	3,470	25,000	28,000	3500K	85
20927	FP35/841/ECO	Miniature Bi-Pin	35	60	3,300	3,135	3,650	3,470	25,000	28,000	4100K	85

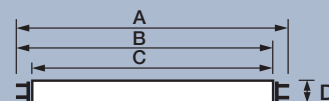
Ordering Guide

FP	14	/	8	30	/	ECO®
Fluorescent PENTRON® T5	Wattage: 14, 21, 28 or 35 watts		8 = 85 CRI	27 = 2700K CCT, 30 = 3000K CCT 35 = 3500K CCT, 41 = 4100K CCT 50 = 5000K CCT, 65 = 6500K CCT		ECOLOGIC®

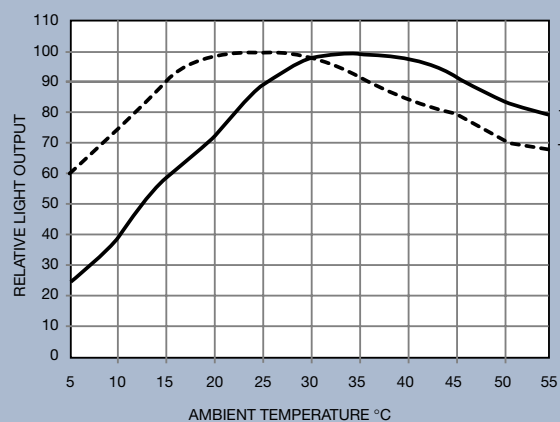
Technical Information

Dimensions

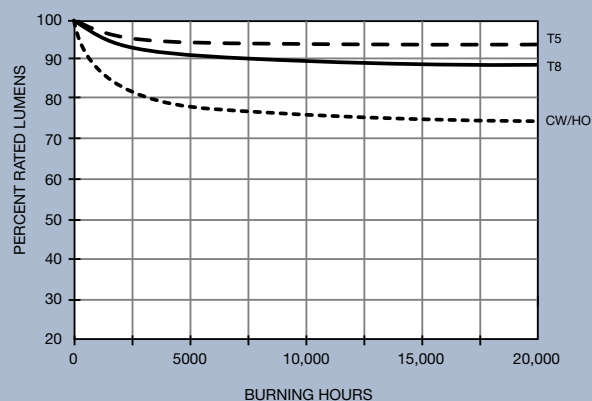
Ordering Abbreviation	(A) Max. Overall Length mm (in.)	(B) Base Face to Opposite Pin mm (in.)	(C) Base Face to Base Face mm (in.)	(D) Max. Outside Diameter mm (in.)
FP14	563.2 (22.17)	553.7 - 556.1 (21.80 - 21.89)	547.1 - 549.0 (21.54 - 21.61)	17.0 (0.67)
FP21	863.2 (33.89)	853.7 - 856.1 (33.61 - 33.70)	847.1 - 849.0 (33.35 - 33.43)	17.0 (0.67)
FP28	1163.2 (45.80)	1153.7 - 1156.1 (45.42 - 45.52)	1147.1 - 1149.0 (45.16 - 45.24)	17.0 (0.67)
FP35	1463.2 (57.61)	1453.7 - 1456.1 (57.23 - 57.33)	1447.1 - 1449.0 (56.97 - 57.05)	17.0 (0.67)



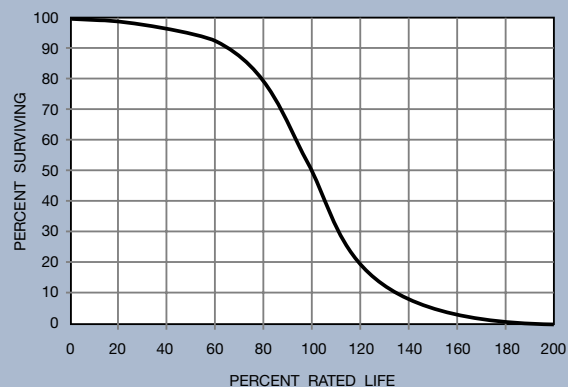
Lumen Output vs. Temperature T8/T5



Fluorescent Lamp Lumen Maintenance



Typical Fluorescent Lamp Mortality



Related Literature

For optimum system performance and warranty pair with QUICKTRONIC® electronic ballast systems:

Ballast Technology Applications & Specification Guide (Literature Code: ECS-Electronic2009)

QUICK 60+® System Warranty (Literature Code: ECS140)

Sample Specification

Lamps shall be PENTRON® ECO® T5 lamps having miniature bi-pin bases and minimum of 95% lumen maintenance. Lamps shall have a correlated color temperature of (2700K, 3000K, 3500K, 4100K, 5000K & 6500K) and a Color Rendering Index of 85. The PENTRON ECO T5 lamps shall be operated on dedicated QUICKTRONIC® PS ballasts having a primary voltage of (120V, 277V) with complete system warranty from the manufacturer covering lamps and ballasts.

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