

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: 3000K, 3500K, 4100K, 5000K and 6500K. When paired with an OSRAM QUICKTRONIC® T5 ballast, these systems are covered by the comprehensive QUICK 60+® system warranty.

Application Information

Applications

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

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
- Up to 36,000 hours lamp life
- TCLP and RoHS compliant
- Lead free glass
- Greater luminaire design flexibility
- Nominal 2', 3', 4' and 5'
- QUICK 60+ system warranty offered when paired with OSRAM QUICKTRONIC T5 electronic ballast



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

Product Offering

Ordering Abbreviation	Wattage	Color Temperature
FP14/800/ECO	14	3000K, 3500K, 4100K, 6500K
FP21/800/ECO	21	3000K, 3500K, 4100K, 6500K
FP28/800/ECO	28	3000K, 3500K, 4100K, 5000K, 6500K
FP35/800/ECO	35	3000K, 3500K, 4100K

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

Catalog #

Project

Comments

Prepared by

Ordering Information

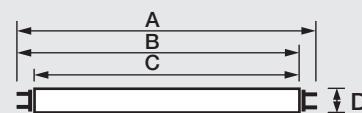
Item Number	Ordering Abbreviation	Base	Watts	Nom. Length (in.)	Initial Lumens @25°C	Mean Lumens @25°C	Initial Lumens @35°C	Mean Lumens @35°C	Programmed Rapid Start 3 hrs/start	Programmed Rapid Start 12 hrs/start	CCT	CRI
20907	FP14/830/ECO	Miniature Bi-Pin	14	24	1200	1140	1350	1285	25,000	28,000	3000K	85
20908	FP14/835/ECO	Miniature Bi-Pin	14	24	1200	1140	1350	1285	25,000	28,000	3500K	85
20914	FP14/841/ECO	Miniature Bi-Pin	14	24	1200	1140	1350	1285	25,000	28,000	4100K	85
20988	FP14/865/ECO	Miniature Bi-Pin	14	24	1100	1045	1300	1235	25,000	28,000	6500K	85
20919	FP21/830/ECO	Miniature Bi-Pin	21	36	1900	1805	2100	1995	25,000	28,000	3000K	85
20921	FP21/835/ECO	Miniature Bi-Pin	21	36	1900	1805	2100	1995	25,000	28,000	3500K	85
20924	FP21/841/ECO	Miniature Bi-Pin	21	36	1900	1805	2100	1995	25,000	28,000	4100K	85
20989	FP21/865/ECO	Miniature Bi-Pin	21	36	1750	1665	2000	1900	25,000	28,000	6500K	85
20868	FP28/830/ECO	Miniature Bi-Pin	28	48	2650	2490	2970	2790	30,000	36,000	3000K	85
20901	FP28/835/ECO	Miniature Bi-Pin	28	48	2650	2490	2970	2790	30,000	36,000	3500K	85
20902	FP28/841/ECO	Miniature Bi-Pin	28	48	2650	2490	2970	2790	30,000	36,000	4100K	85
22203	FP28/850/ECO	Miniature Bi-Pin	28	48	2550	2400	2850	2680	30,000	36,000	5000K	85
20990	FP28/865/ECO	Miniature Bi-Pin	28	48	2550	2400	2850	2680	30,000	36,000	6500K	85
20925	FP35/830/ECO	Miniature Bi-Pin	35	60	3300	3135	3650	3470	25,000	28,000	3000K	85
20926	FP35/835/ECO	Miniature Bi-Pin	35	60	3300	3135	3650	3470	25,000	28,000	3500K	85
20927	FP35/841/ECO	Miniature Bi-Pin	35	60	3300	3135	3650	3470	25,000	28,000	4100K	85

Ordering Guide

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

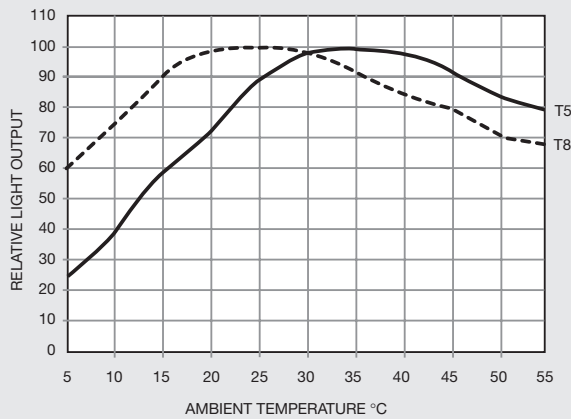
Lamp Dimensions

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 (33.98)	853.7 - 856.1 (33.61 - 33.71)	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)

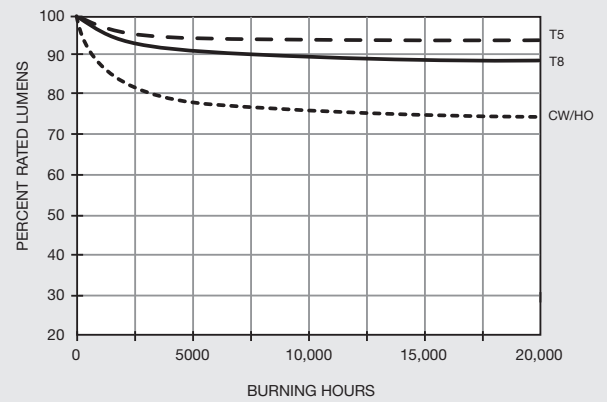


Technical Information

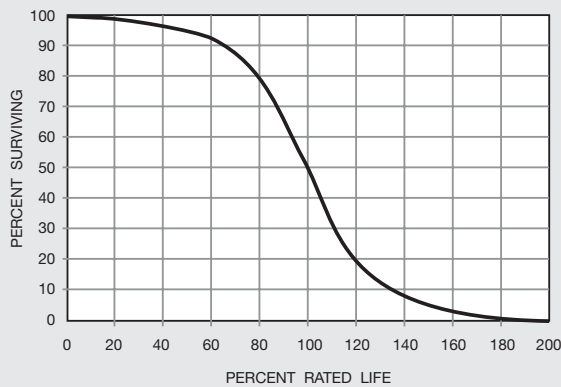
Lumen Output vs. Temperature T8/T5



Fluorescent Lamp Lumen Maintenance



Typical Fluorescent Lamp Mortality



Related Literature

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

OSRAM Ballast Technology Applications & Specification Guide (Literature Code: ECS-SPECGUIDE2015)

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 (3000K, 3500K, 4100K, 5000K & 6500K) and a Color Rendering Index of 85. The PENTRON ECO T5 lamps shall be operated on universal OSRAM QUICKTRONIC® PS ballasts having a primary voltage of (120V, 277V) with complete system warranty covering lamps and ballasts.

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