

# PENTRON® C HO ECOLOGIC®

## High Output T5 Linear Fluorescent Lamp



PENTRON C T5 HO ECOLOGIC lamps provide constant light output over a wide temperature range – at least 90% of full light output from 10°C to 70°C (50°F–158°F) – through the use of amalgam technology. This enables the lamps to provide much more light in both cooler and hotter environments than present fluorescent technology. PENTRON C lamps are an alternative lighting solution for many traditional HID applications with all the benefits of fluorescent – immediate restrike, selection of color temperatures, consistent color through life, excellent color rendition and long life.

### Application Information

#### Applications

- Canopy lighting
- Facade lighting
- Indirect
- Industrial and warehouse lighting
- Security lighting
- Sign lighting

#### Fixtures

Contact your local fixture agent for available fixtures.

#### Ballast Information

Contact your SYLVANIA representative for a list of compatible electronic control systems.

### Key Features & Benefits

- Produces at least 90% of full light output over 60°C (108°F) range, much more than standard T5 lamps
- Suitable for both cold and hot environments
- TCLP compliant<sup>1</sup>
- 85 CRI
- Rated initial lumens – 4,900 for 3500K and 4100K, 4,800 for 5000K (FP24 – 1,950 for 4100K)
- 95% lumen maintenance factor
- Designated for use on Programmed Start ballast
  - 35,000 hours life @ 12 hours/start
  - 25,000 hours life @ 3 hours/start
- QUICK 60+<sup>®</sup> system warranty when paired with QUICKTRONIC<sup>®</sup> electronic ballasts

SYLVANIA PENTRON C HO ECOLOGIC fluorescent lamps are designed to pass the Federal Toxicity Characteristic Leaching Procedure (TCLP) criteria for classification as non-hazardous waste in most states<sup>2</sup>.

1. TCLP test results are based on NEMA LL Series standards and are available on request.
2. Lamp disposal regulations may vary; check your local & state regulations.



### Product Offering

Lamp Type	Wattage	CCT
FP24/800/C/HO/ECO	24	4100K
FP54/800/C/HO/ECO	54	3500K, 4100K, 5000K

### Application Notes

1. All PENTRON lamps are about 2" shorter than T8 and T12 bi-pin lamps.
2. Miniature bi-pin bases cannot be installed into T8 & T12 sockets.
3. Miniature bi-pin bases require UL Listed 600 Volt rated sockets.
4. 800/C/HO/ECO lamps require Programmed Rapid Start electronic ballasts for T5 HO lamps, equipped with end-of-lamp life sensing circuit.
5. Not recommended for use on dimming circuits.
6. The warm-up time is longer than for standard PENTRON HO. This may be more noticeable when some lamps in a fixture are controlled by occupancy sensors.



## Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

## Ordering Information

Item Number	Ordering Abbreviation	Watts	Nominal Length (in)	Base	Average Rated Life		Mean Lumens <sup>1</sup>	Initial Lumens <sup>1,2</sup>	CCT	CRI
					Programmed 3 hrs/start	Rapid Start 12 hrs/start				
21042	FP54/835/C/HO/ECO	54	48	Mini Bi-Pin	25,000	35,000	4,900	4,655	3500K	85
21043	FP54/841/C/HO/ECO	54	48	Mini Bi-Pin	25,000	35,000	4,900	4,655	4100K	85
21044	FP54/850/C/HO/ECO	54	48	Mini Bi-Pin	25,000	35,000	4,800	4,560	5000K	85
21056	FP24/841/C/HO/ECO	24	24	Mini Bi-Pin	20,000	N/A	1,950	1,760	4100K	85

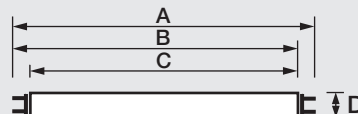
1. Measured at 25°C or 35°C  
2. Measured at 8000 hours

## Ordering Guide

FP	54	/	8	35	/	C	/	HO	/	ECO®
FLUORESCENT	Wattage:		CRI	Color Temperature		Constant		High		TCLP
PENTRON®	24 and 54 watts		80+ CRI	35 = 3500K CCT 41 = 4100K CCT 50 = 5000K CCT		Output		Output		Compliant ECOLOGIC®

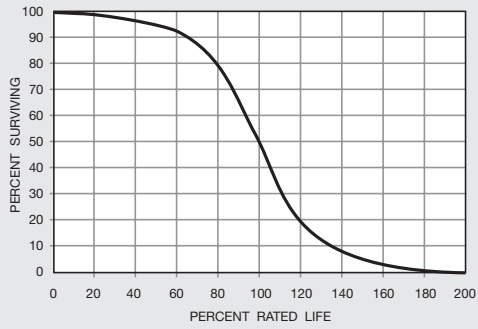
## Lamp Dimensions

	(A) Max. Overall Length (in.)	(B) Base Face to Opposite Pin (in.)	(C) Max. Base Face to Base Face (in.)	(D) Max. Outside Diameter (in.)
FP54	45.80"	Min. 45.41" Max. 45.51"	45.24"	0.67"
FP24	22.17"	Min. 21.80" Max. 21.89"	21.61"	0.67"

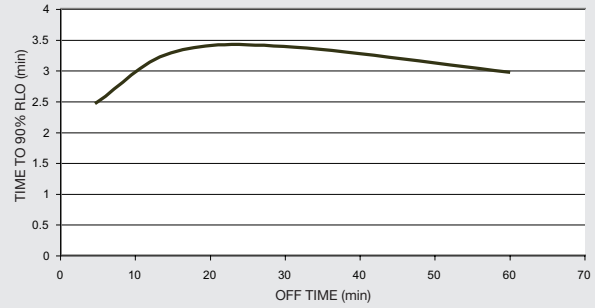


## Technical Information

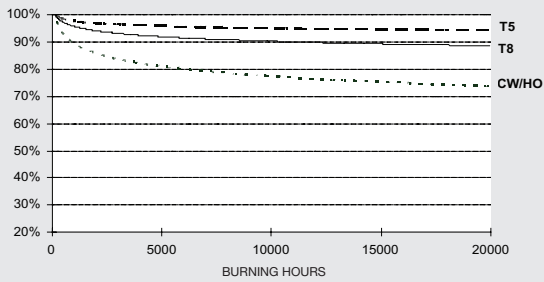
Lamp Mortality Curve



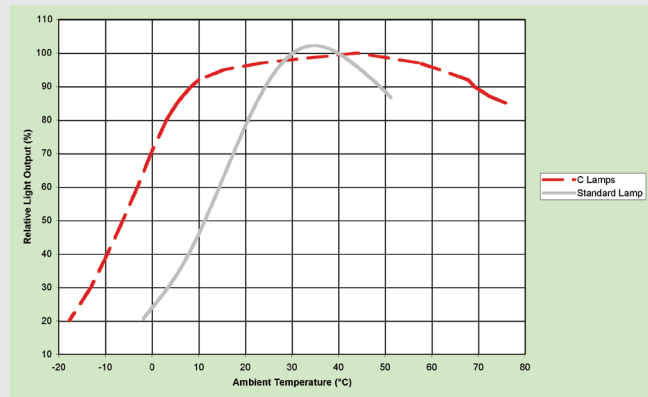
Lamp Run Up as a Function of Off Time



Lumen Maintenance



Relative Light Output versus Average Ambient Temperature for 54W PENTRON C and Standard PENTRON  
- Based on a maximum of 4900 lumens for PENTRON C



## Sample Specification

Lamp(s) shall be (a) PENTRON C T5 HO ECO using mercury amalgam to maintain a minimum of 90% of full light output from 10°C to 70°C (50°F – 158°F). Lamp(s) shall have miniature bi-pin bases and be TCLP compliant. Lamp(s) shall have a correlated color temperature of (3500, 4100, 5000) and a Color Rendering Index of 85.

Lamp(s) shall be rated at 35,000 hours life when operated 12 hours per start, 25,000 hours when operated 3 hours per start and 20,000 for FP24.

Lamp(s) shall be operated on QUICKTRONIC® PHO programmed rapid start ballasts with a complete system warranty from the same manufacturer covering both lamps and ballasts.

