

LEDVANCE Lamps

SubstiTUBE™ LED T5HO UL Type A Lamps

Application

LEDVANCE SubstiTUBE linear LED T5 High Output lamps are a lightweight, energy saving alternative to replace traditional fluorescent T5HO high output lamps. Reduced energy usage saves operational costs resulting in attractive payback time while providing an easy way to upgrade to LED technology.

These LED T5HO lamps contain no mercury, provide instant light and a uniform light distribution. Engineered to operate with existing compatible ballasts, these lamps minimize labor and recycling costs. These lamps can be used with occupancy and vacancy sensors for enhanced energy savings.

Benefits and Features

- Efficacy up to 125 LPW
- CRI >80
- No lamp polarity
- No warm-up time, instant-on with full light output and stable lamp-to-lamp color
- 3000K, 3500K, 4100K, and 5000K color temperatures
- Beam angle: 180° with frosted glass optics
- Light emitting angle: 320°
- No warm-up time, instant-on with full light output and stable lamp-to-lamp color
- No UV emission
- Suitable for dry and damp locations
- Can be used in enclosed (lens or diffuser) luminaire. Not approved for use in vapor tight or sealed luminaire.

Electrical

- Compatible with select programmed rapid start electronic T5 ballasts with input voltage of 120-277V and 347V
- Power Factor >0.9
- THD <20%
- Dimmable down to 10% with 0-10V compatible dimmable ballasts

Rated Life

- 50,000 hours (L₇₀)



Wattage Comparison

Traditional Source	Traditional System Wattage	LED System	LED System Wattage	Energy Savings
QHE 2X54T5HO/UNV PSN	120	LED24T5HOL48FGDIM8XXSUBG9	56	53%

Warranty

- Lamps are covered by a 5-year limited warranty. For additional details, please visit www.ledvanceUS.com/warranty
- NLB Trusted Warranty Program

Operating Temperature

- -4°F to +113°F (-20°C to +45°C)

Max Case Temperature

- 167°F (75°C)

Certifications and Listings

- cETLus (UL 1993, CSA 22.2)
- RoHS
- FCC, ICES
- Lead Free
- Mercury Free
- NSF (ANSI 2 – Food Equipment)
- DLC 5.1

Installation

- Please refer to the Installation manual included inside the packaging and the applications information listed below for more information.
- For proper use and warranty coverage, installer must consult the ballast compatibility list to ensure that the lamp and ballast combination is deemed compatible and will operate as intended.

Ballast
Compatibility
Guide



Catalog #	Type
Project	
Comments	
Prepared by	

Ordering Guide

LED	24	T5HO	L48	FG	DIM	8	XX	SUB	G9
Product Name	Wattage	Lamp Type	Length	Color/Finish	Dimming	CRI	Color Temperature	Operation	Generation
LED	24 = 24 Watts	T5HO	L48 = 48"	FG = Frosted Glass	DIM = Dimmable	8 = 82	30 = 3000K 35 = 3500K 41 = 4100K 50 = 5000K	SUB = UL Type A	G9 = Gen 9

Ordering Information

Item Number	Ordering Abbreviation	Lamp Power (W)	Base Type	Replaces	Avg. Life (hrs)	Typical Lumens (lm)	CRI	CCT	Power Factor	Bulb Finish	Case Qty	DLC
41592	LED24T5HOL48FGDIM830SUBG9	24	G5	FP54/830/HO/ECO	50,000	3400	82	3000K	>0.90	Frosted Glass	25	5.1
41593	LED24T5HOL48FGDIM835SUBG9	24	G5	FP54/835/HO/ECO	50,000	3400	82	3500K	>0.90	Frosted Glass	25	5.1
41594	LED24T5HOL48FGDIM841SUBG9	24	G5	FP54/841/HO/ECO	50,000	3500	82	4100K	>0.90	Frosted Glass	25	5.1
41595	LED24T5HOL48FGDIM850SUBG9	24	G5	FP54/850/HO/ECO	50,000	3500	82	5000K	>0.90	Frosted Glass	25	5.1

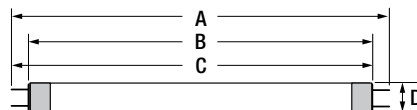
Specifications & Lighting Data

Lamp	Ballast	Current (AMPS)	System Power (W)	System Lumens (lm)*	System Efficacy (lm/W)	No of Lamps
LED24T5HOL48FGDIM8XXSUBG9	QHE 2X54T5HO/UNV PSN	0.467/0.202	56	7000	125	2

*Lumens at 4000K CCT

Physical Information

Model	(A) Max. Overall Length (in/mm)	(B) MIN Base Face to Opposite Base Face (in/mm)	(B) MAX Base Face to Opposite Base Face (in/mm)	(C) MIN Base Face to Opposite Base Pin (in/mm)	(C) MAX Base Face to Opposite Base Pin (in/mm)	(D) MAX (in/mm)
LED24T5HOL48FGDIM8XXSUBG9	45.80/1163	45.16/1147	45.24/1149	45.42/1153	45.52/1156	0.67/17



Application Information

1. Suitable for use in dry and damp environments.
2. Due to numerous ballast designs and topologies, this lamp should be tested on existing ballasts before mass quantities are installed.
3. Please read all installation instructions before attempting inspection, service or installation.
4. All installation, inspection, and maintenance of lighting fixtures should be done with the power to the fixture turned off. Lamps should be installed and operated in compliance with the National Electrical Code (NEC), Underwriters Laboratories Inc. (UL) requirements, and all applicable codes and regulations.
5. Not for use with other LED or fluorescent lamps on the same ballast.
6. Not for use with ballasts more than ten years old.
7. Insert and align tubes properly in lamp holders. Partial insertion results in a poor or intermittent electrical contact that can result in short lamp life and arcing. Arcing at the lamp holder can result in localized overheating.
8. Operating temperature range between -4°F and 113°F (-20°C and 45°C).
9. Maximum mounting distance between tube and ballast is 20 feet.
10. Due to the programmed rapid start coil-heat circuitry, start times of lamps within a fixture may vary, but all reach maximum lumen output in less than one second.
11. Please read all installation instructions before attempting installation.
12. For detailed warranty information, please see www.ledvanceUS.com.
13. No de-lamping is allowed on any SubstiTUBE™ T5HO product. Should a lamp fail in the application, replace it immediately to avoid an N-1 condition.

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