

LEDVANCE Lamps

SubstiTUBE™ LED T5HE UL Type A Lamps

Application

LEDVANCE SubstiTUBE linear LED T5 High Efficiency lamps are a lightweight, energy saving alternative to replace traditional fluorescent T5 standard output lamps. Reduced energy usage saves operational costs resulting in attractive payback time while providing an easy way to upgrade to LED technology. The full product family offers multiple lengths and color temperatures and covers a wide variety of applications.

These LED T5 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

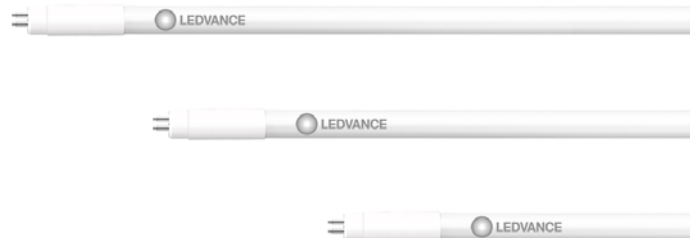
- Efficacy up to 125 LPW
- CRI >80
- No lamp polarity
- No warm-up time, instant-on with full light output and stable lamp-to-lamp color
- 3000K, 3500K, 4100K, and 5000K color temperatures
- Beam angle: 180° with frosted glass optics
- Light emitting angle: 320°
- No warm-up time, instant-on with full light output and stable lamp-to-lamp color
- No UV emission
- Suitable for dry and damp locations

Electrical

- Compatible with select programmed rapid start electronic T5 ballasts with input voltage of 120-277V and 347V
- Power Factor >0.9
- THD <20%
- 13W 4ft lamps are 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
QTP 2X28T5/UNV PSN	32	LED7T5HEL24FG8XXSUBG2	17	47%
QTP 2X28T5/UNV PSN	47	LED10T5HEL36FG8XXSUBG2	24	49%
QTP 2X28T5/UNV PSN	63	LED13T5HEL48FG8XXSUBG2	32	49%

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

- cULus
- RoHS
- FCC
- NSF
- Lead Free
- Mercury Free
- DLC 5.1 for 4ft lamps

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	XX	T5HE	L96	FG	DIM	8	XX	SUB	G2
Product Name	Wattage	Lamp Type	Length	Color/Finish	Dimming	CRI	Color Temperature	Operation	Generation
LED	7 = 7 Watts 10 = 10 Watts 13 = 13 Watts	T5HE	L24 = 24" L36 = 36" L48 = 48"	FG = Frosted Glass	DIM = Dimmable	8 = 82	30 = 3000K 35 = 3500K 41 = 4100K 50 = 5000K	SUB = UL Type A	G2 = Gen 2

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
42040	LED7T5HEL24FG830SUBG2	7	G5	FP14/830/ECO	50,000	1000	82	3000K	>0.90	Frosted Glass	25	N/A
42041	LED7T5HEL24FG835SUBG2	7	G5	FP14/835/ECO	50,000	1000	82	3500K	>0.90	Frosted Glass	25	N/A
42042	LED7T5HEL24FG841SUBG2	7	G5	FP14/841/ECO	50,000	1000	82	4100K	>0.90	Frosted Glass	25	N/A
42043	LED7T5HEL24FG850SUBG2	7	G5	FP14/850/ECO	50,000	1000	82	5000K	>0.90	Frosted Glass	25	N/A
42044	LED10T5HEL36FG830SUBG2	10	G5	FP21/830/ECO	50,000	1400	82	3000K	>0.90	Frosted Glass	25	N/A
42045	LED10T5HEL36FG835SUBG2	10	G5	FP21/835/ECO	50,000	1400	82	3500K	>0.90	Frosted Glass	25	N/A
42046	LED10T5HEL36FG841SUBG2	10	G5	FP21/841/ECO	50,000	1500	82	4100K	>0.90	Frosted Glass	25	N/A
42047	LED10T5HEL36FG850SUBG2	10	G5	FP21/850/ECO	50,000	1500	82	5000K	>0.90	Frosted Glass	25	N/A
42048	LED13T5HEL48FGDIM830SUBG2	13	G5	FP28/830/ECO	50,000	2000	82	3000K	>0.90	Frosted Glass	25	5.1
42049	LED13T5HEL48FGDIM835SUBG2	13	G5	FP28/835/ECO	50,000	2000	82	3500K	>0.90	Frosted Glass	25	5.1
42050	LED13T5HEL48FGDIM841SUBG2	13	G5	FP28/841/ECO	50,000	2100	82	4100K	>0.90	Frosted Glass	25	5.1
42051	LED13T5HEL48FGDIM850SUBG2	13	G5	FP28/850/ECO	50,000	2100	82	5000K	>0.90	Frosted Glass	25	5.1

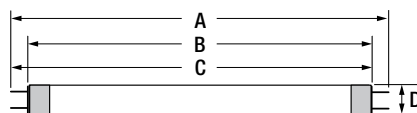
Specifications & Lighting Data

Lamp	Ballast	Current (AMPS)	System Power (W)	System Lumens (lm)*	System Efficacy (lm/W)	No of Lamps
LED7T5HEL24FG8XXSUBG2	QTP 2X28T5/UNV PSN	0.142/0.0614	17	2000	118	2
LED10T5HEL36FG8XXSUBG2	QTP 2X28T5/UNV PSN	0.192/0.0830	24	3000	125	2
LED13T5HEL48FGDIM8XXSUBG2	QTP 2X28T5/UNV PSN	0.267/0.1155	32	4200	131	2

*Lumens at 4100K 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)
LED7T5HEL24FG8XXSUBG2	22.17/563	21.54/547	21.61/549	21.8/553	21.89/556	0.67/17
LED10T5HEL36FG8XXSUBG2	33.98/863	33.35/847	33.43/849	33.61/853	33.71/856	0.67/17
LED13T5HEL48FGDIM8XXSUBG2	45.80/1163	45.16/1147	45.24/1149	45.42/1153	45.52/1156	0.67/17



Application Information

1. Due to numerous ballast designs and topologies, this lamp should be tested on existing ballasts before mass quantities are installed.
2. Please read all installation instructions before attempting inspection, service or installation.
3. 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.
4. 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.
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. No de-lamping allowed for any SubstiTUBE T5HE products. Should a lamp fail in the application, replace it immediately to avoid an N-1 condition.
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. Suitable for use in dry and damp environments.
11. 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.
12. This product cannot be used with High Output Ballasts.
13. For detailed warranty information, please see www.ledvanceUS.com.
14. For High Output applications refer to LEDVANCE SubstiTUBE™ T5HO products and documentation.

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