

SYLVANIA Lamps

DUALescent™ T8 Universal Lamp

UL Type A+B

Application

Product is ideal for upgrading fluorescent fixtures to LED, which provides energy savings. DUALescent provides flexibility for the distributor and contractor with one lamp to satisfy either operation with a ballast or directly on line voltage.

Benefits and Features

- Utilizes either fluorescent ballast or operates directly on line voltage providing flexibility in installation
- Lamps operate on shunted and non-shunted lampholders thereby reducing installation costs.
- DLC listed allows for rebates in areas where applicable, saving on overall project cost
- No polarity; can be installed in either direction, saving time (costs) in installation
- Low wattage lamp providing for maximum energy savings
- Operated as UL Type A, DUALescent is compatible with instant start and select programmed rapid start ballasts
- When used as UL Type B, DUALescent can also be used to replace fluorescent T12 lamps
- Suitable for use with tube guards
- Suitable for dry and damp locations – not for use where directly exposed to water
- For UL Type A: Compatible with the following Emergency Ballasts: IOTA: ISL-54, ISL-540 and I-160
- Up to 150 LPW
- 3000K, 3500K, 4100K and 5000K color temperature
- Non-dimmable
- CRI 82
- Available beam angle: 220°; Light emitting angle: 320°

Electrical

- 120-277V_{AC}
- Power Factor 90%
- THD <20%

Rated Life

- 50,000 hours (L₇₀)

Warranty

- 5-year



Wattage Comparison

	Traditional Source	Traditional System Wattage	LED System Wattage	Energy Savings
Type A	F032T8 2XISN QHE	55	30.8	28.2W/48%
Type B	F032T8 2XISN QHE	55	24.6	32.6W/55%

Ambient Operating Range

- -4°F to +113°F (-20°C to +45°C)

Certifications and Listings

- cULus 1993
- cULus 1598c
- RoHS
- Lead Free
- NSF
- FCC
- DLC Standard

Installation

- When using DUALescent as UL Type B directly on line voltage, to conform to UL, you must affix the luminaire warning sticker, included in the packaging, to the fixture during installation. Should you install as UL Type A, please retain the luminaire warning stickers in a safe place for future use if planning to convert to UL Type B.
- Please refer to the Installation manual included inside the packaging for more installation.
- Best practice is to cap-off the remaining ballast wires should ballast be left in fixture after disconnecting.

Specifications and Certifications



Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

Ordering Guide

LED	12	T8	L	48	FG	8	30	AB
LED	Wattage	Lamp Type	Length	48 inches	Frosted Glass	CRI	Color Temperature	DUALescent™ Universal T8, UL Type A+B
						82	30 = 3000K 35 = 3500K 41 = 4100K 50 = 5000K	

Ordering Information

Item Number	Ordering Abbreviation	Power (W)	Base Type	Replaces	Input Voltage (V)	Average Life (hrs)	CCT	Case Qty	Typical Lumens (lm)	CRI	Power Factor	Bulb Finish	DLC Listed
40587	LED12T8L48FG830AB	12	Medium bi-pin G13	4ft T8	120-277V	50,000	3000K	25	1800	82	≥ 0.90	Frosted	Yes
40588	LED12T8L48FG835AB	12	Medium bi-pin G13	4ft T8	120-277V	50,000	3500K	25	1800	82	≥ 0.90	Frosted	Yes
40589	LED12T8L48FG841AB	12	Medium bi-pin G13	4ft T8	120-277V	50,000	4100K	25	1800	82	≥ 0.90	Frosted	Yes
40590	LED12T8L48FG850AB	12	Medium bi-pin G13	4ft T8	120-277V	50,000	5000K	25	1800	82	≥ 0.90	Frosted	Yes

Specifications & Lighting Data

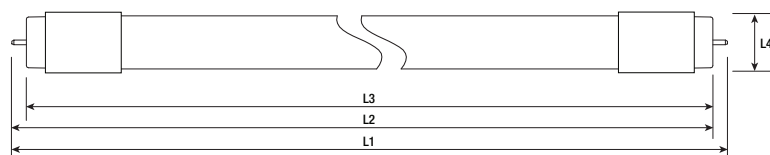
Lamp	Ballast	Current (Amps)	System Power (W)	System Lumens (lm)	System Efficacy (lm/W)	No of Lamps
LED12T8L48FG8XXAB	QHE 2X32T8/UNV ISN	0.24/0.11	28.0	3600	128	2

Energy Savings

Basic Product Description	LED Life (hrs)	LED Lumens	Similar Fluorescent (hrs)	Fluorescent Lumens	Watts Saved	Energy Savings*	LED Life vs Fluorescent
LED12T8L48FG8XXAB (used as Type A)	50,000	1800	24,000	2600	28.2	\$155.10	108%
LED12T8L48FG8XXAB (used as Type B)	50,000	1800	24,000	2600	32.6	\$179.30	108%

*Energy savings over life of lamp calculated at \$0.11/kWh

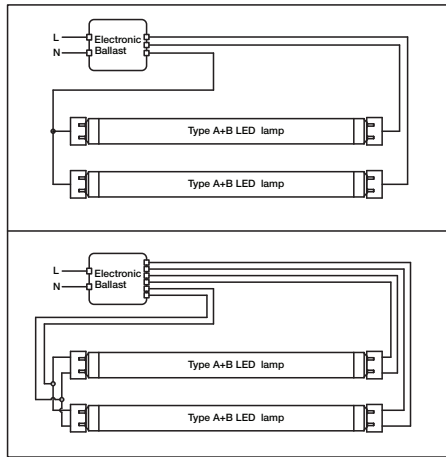
Physical Information



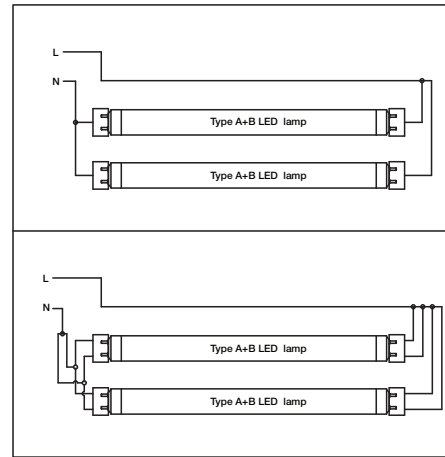
Lamp Description	L1 End of Base Pin to End of Opposite Pin End	L2 Base Face to Opposite Base Pin	L3 Base Face to Base Face	L4 Bulb Outside Diameter
LED/L48	47.725" ±0.055" (1212.2mm ±1.4mm)	47.45" ±0.05" (1205.25mm ±1.25mm)	max 47.22" (1199.4mm)	1.02" ±0.08" (25.9mm ±2.0mm)

Wiring Diagram

UL Type-A



UL Type-B



Application Information

Application Notes

1. Please read and comply with all instructions before attempting installation.
2. 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 Electric Code (NEC), Underwriters Laboratories, Inc. (UL) requirements, and all applicable codes and regulations.
3. Ensure lampholders/sockets are in good operating condition before installation and if any defects are detected, change the lampholders/sockets.
4. Do not make or alter any open holes in an enclosure of wiring or electrical components during installation.
5. Do not expose wiring to edges of sheet metal or other sharp objects.
6. Make sure the lamps have the proper connections before restoring power.
7. When converting a fixture from Type A to Type B and emergency back-up is desired, the installer would also have to change the existing emergency back-up to an inverter-type emergency driver.
8. EM ballast that operates with fluorescent ballast must be disconnected from the lamp while DUALescent operates in type B mode.
9. For detailed warranty information, please visit www.sylvania.com.

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