

# LEDVANCE LAMPS

## DUALescent™ LED T8 CCT SELECTABLE UL TYPE (A+B) LAMPS

### LEDVANCE LAMP SPECIFICATION DATA

Catalog #	Comments
Project	
Type	
Prepared by	

### APPLICATION

DUALescent™ LED T8 lamps are an ideal solution to upgrade fluorescent fixtures whether they are T12 or T8. These lamps provide a CCT selectable feature that allows for selecting desired color temperature ranging from 3000K to 6500K. These T8 LED lamps are an energy saving alternative, contain no mercury, and provide instant light and a uniform light distribution. Engineered to operate on existing instant start and select program rapid start electronic T8 ballasts or wired directly to line voltage, these lamps minimize labor and recycling costs. This family of lamps, when installed as Type B, should be wired in the double-ended wiring configuration; however, if the fixture has been reconfigured as single-ended, these lamps are a direct retrofit. DUALescent provides flexibility for the distributor or contractor with one lamp to satisfy either operation with a ballast or line voltage.

When installing these lamps in UL Type B mode, the UL rating of the existing fixture is not voided (even when it is electrically modified) since our DUALescent T8 lamp is UL Classified (as a luminaire conversion retrofit kit) under UL standard 1598C.



### BENEFITS & FEATURES

- Selectable CCT: 3000K/3500K/4100K/5000K/6500K
- G13 base LED T8 for use with instant start and select programmed rapid start electronic T8 ballasts or direct wire to 120-277V
- Can be used in Single-Ended (SE) and Double-Ended (DE) wiring configurations
- Lamps operate on shunted and non-shunted lamp holders thereby reducing installation costs when wired in the double-ended configuration (recommended)

- No polarity; can be installed in either direction for DE wiring
- Operated as UL Type B, DUALescent can also be used to replace T12 lamps
- Suitable for dry and damp locations — not for use where directly exposed to water
- DLC listing allows for rebates in areas where applicable, saving on overall project cost
- Optimized glass optics
- Beam angle: 200°; Light emitting angle: 320°
- CRI >80
- No warm-up time, instant-on with full light output and stable lamp-to-lamp color
- No UV emission
- Energy savings up to 58%



## ELECTRICAL

- Operated with compatible ballasts and directly on 120-277V
- Power Factor > 0.9 and THD < 20%
- UL Type B: Lamps are dimmable down to 10% with 120V phase cut dimmers (see the dimmer list below)
- UL Type A: Dimmable with 0-10V dimmers and compatible dimming ballasts (refer to ballast compatibility guide)

## RATED LIFE

- 50,000hrs (L<sub>70</sub>)

## OPERATING TEMPERATURE

- -4°F to +113°F (-20°C to +45°C)

## MAXIMUM CASE TEMPERATURE

- 158°F (70°C)

## WARRANTY

- 5-year limited warranty (24/7 operation). Visit [ledvanceUS.com/warranty](http://ledvanceUS.com/warranty) for additional details
- NLB Trusted Warranty Program

## INSTALLATION

- Please refer to the Installation manual included inside the packaging and the applications information listed below for more information

## CERTIFICATIONS & LISTINGS

- cULus 1993 and 1598c (CSA C22.2 NO. 250.1-16)
- DLC 5.1
- NSF
- FCC and ICES\*
- Mercury Free
- RoHS

\*Type A: ICES & FCC: Part 18 Class A  
Type B: ICES & FCC: Part 15 Class B

## ORDERING GUIDE

LED	XX	T8	FG	D	8	SC12	AB
LED	WATTAGE	LAMP TYPE	COLOR/FINISH	DIMMING	CRI	COLOR TEMP	OPERATION
LED = LED Lamp	12 = 12 Watts 15 = 15 Watts	T8	FG = Frosted Glass	DIM = Dimmable	8 = 82	SC12 = CCT Selectable (3000K/3500K/4100K/5000K/6500K)	AB = UL Type (A+B)

## ORDERING INFORMATION

ITEM #	ORDERING ABBREVIATION	LENGTH	REPLACES	LAMP POWER (W)	INPUT VOLTAGE (V)	LIFE (L70) HOURS	COLOR TEMP (CCT) (K)	TYPICAL LUMEN (LM) @4100K	CRI	DIM.	POWER FACTOR	BULB FINISH	DLC
41661	LED12T8L48FGDIM8SC12AB	4'	FO328XXECO	12	120-277V or Ballast	50,000	3000/3500/4100/5000/6500	1700	82	Y	>0.90	Frosted Glass	5.1
41662	LED15T8L48FGDIM8SC12AB	4'	FO328XXECO	15	120-277V or Ballast	50,000	3000/3500/4100/5000/6500	2100	82	Y	>0.90	Frosted Glass	5.1

## SPECIFICATIONS AND LIGHTING DATA

DESCRIPTION	CCT (K)	WATTAGE	LUMEN	EFFICACY	CURRENT (AMPS)	WATTAGE	LUMEN	EFFICACY	CURRENT (AMPS)
LED12T8L48FGDIM8SC12AB	Type A**				0.112/0.050	Type B			
	3000	13.5	1650	122		11.4	1540	135	0.115/0.050
	3500	13.5	1700	126		11.4	1580	139	
	4100	13.4	1740	130		11.3	1610	142	
	5000	13.4	1730	129		11.4	1600	141	
6500	13.5	1650	122	11.4	1530	134			
LED15T8L48FGDIM8SC12AB	Type A**				0.146/0.063	Type B			
	3000	17.6	2100	119		14.9	1970	132	0.145/0.063
	3500	17.5	2150	123		14.9	2050	137	
	4100	17.4	2200	127		14.8	2090	142	
	5000	17.4	2200	126		14.8	2100	142	
6500	17.6	2110	120	14.9	2110	141			

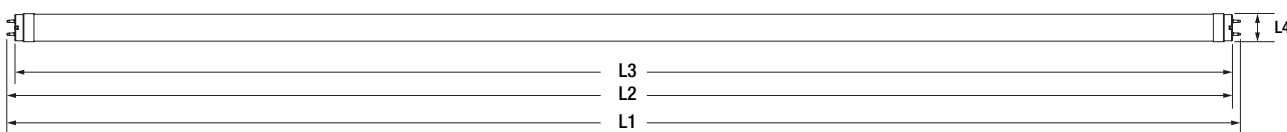
\*\*System data on QHE2X32UNV ISN-SC stated per lamp

## WATTAGE COMPARISON

ITEM #	TRADITIONAL SOURCE	TRADITIONAL SYSTEM WATTAGE	LED SYSTEM	LED SYSTEM WATTAGE (TYPE B)	ENERGY SAVINGS
41661	4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC	55	LED12T8L48FGDIM8SC12AB w/QHE 2X32T8UNV ISN-SC	26	53%
41662	4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC	55	LED15T8L48FGDIM8SC12AB w/QHE 2X32T8UNV ISN-SC	34	38%
41661	4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC	55	LED12T8L48FGDIM8SC12AB Direct wire	23	58%
41662	4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC	55	LED15T8L48FGDIM8SC12AB Direct wire	30	45%

## PHYSICAL INFORMATION

LAMP DESCRIPTION	L1 END OF BASE PIN TO END OF OPPOSITE PIN END IN (MM)	L2 BASE FACE TO OPPOSITE BASE PIN IN (MM)	L3 BASE FACE TO BASE FACE IN (MM)	L4 DIAMETER IN (MM)	WEIGHT (LB/G)
LED12T8L48FGDIM8SC12AB (4ft)	47.725 ± 0.055 (1212.2 ± 1.4)	47.45 ± 0.05 (1205.25 ± 1.25)	max 47.22 (1199.4)	1.02 ± 0.08 (25.9±2.0)	0.51/230
LED15T8L48FGDIM8SC12AB (4ft)	47.725 ± 0.055 (1212.2 ± 1.4)	47.45 ± 0.05 (1205.25 ± 1.25)	max 47.22 (1199.4)	1.02 ± 0.08 (25.9±2.0)	0.51/230



## DIMMER COMPATIBILITY

### UL TYPE A

0-10V Compatible dimmers with compatible dimming ballasts

DIMMER	MODEL
MODEL	NTSTV-DV
Lutron	NSTV
Lutron	DVTV
Lutron	DVSTV
Leviton	DS710
Leviton	IP710
Legrand	H4FBL3PW

### FOR UL TYPE B

Dimming is only wired to 120V input voltage

DIMMER	MODEL
Lutron	DVLEV – 303P
Lutron	CTLEV – 303P
Lutron	NTLEV – 300
Lutron	NTLEV – 600

## EM COMPATIBILITY

- For UL Type A: Refer to ballast compatibility guide
- For UL Type B: Compatible with the LEDVANCE Emergency battery backup (Part no. 75740)

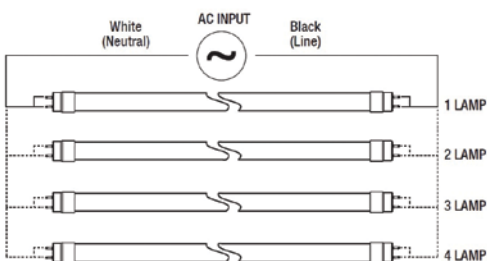


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## WIRING DIAGRAM FOR UL TYPE B APPLICATION

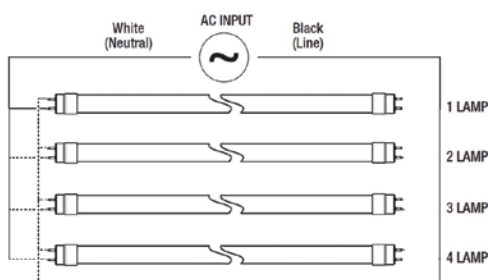
### DOUBLE-ENDED WIRING

Recommended wiring configuration for all new applications



### SINGLE-ENDED WIRING

For installations previously wired in single-ended configuration



## APPLICATION NOTES

- Please read and comply with all instructions, including the installation manual included inside the packaging before attempting installation
- 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
- **IMPORTANT:** For all new installations operating as UL Type B, follow the wiring instructions for double-ended wiring (recommended). Approved for Single-ended configuration for existing UL Type B applications previously wired as such. See installation manual for wiring options
- Ensure lamp holders/sockets are in good operating condition before installation and if any defects are detected, change the lamp holders/sockets
- 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
- For instant start ballasts, use lamp holders with an internal shunt or ensure that lamp holders are wired in a shunt configuration
- For Programmed Rapid Start ballast, use rapid-start lamp holders (non-shunted lamp holders)
- De-lamp is not allowed for ISH ballasts. For approved ISN and ISL ballast, de-lamp is allowed for only 1 lamp so long as the ballast factor remains below 1.20 (for example, 4 lamp ballast can de-lamp to 3 lamps)
- Maximum mounting distance between lamp and ballast is 20 feet
- Not for use with other LED or fluorescent lamps on the same ballast
- Not for use with magnetic ballasts
- When using DUALescent™ as UL Type B wired directly to line voltage, to conform to UL, you **MUST** affix the luminaire warning sticker, included inside 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, should the ballast fail, and luminaire is converted to UL Type B
- Best practice when using at UL Type B: cap off the remaining ballast wires should the ballast be left in the fixture after disconnecting
- Do not make or alter any open holes in an enclosure of wiring or electrical components during installation.
- Do not expose wiring to edges of sheet metal or other sharp objects
- Make sure the lamps have the proper connections before restoring power
- 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
- EM ballast that operates with fluorescent ballast must be disconnected from the lamp while DUALescent operates in type B mode
- For detailed warranty information, please visit [www.ledvanceUS.com](http://www.ledvanceUS.com)

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