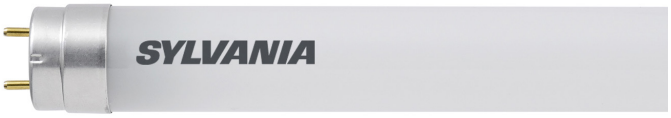
SYLVANIA Lamps

SubstiTUBE® IPS LED T8

Compatible LED T8 for use with instant start and select programmed rapid start electronic T8 ballasts

SubstiTUBE IPS LED T8 lamps are an energy saving alternative, designed to replace traditional fluorescent T8 lamps. These LED T8 lamps 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, these lamps minimize labor and recycling costs.



Benefits and Features

- The SubstiTUBE IPS LED T8 is not affected by switching cycles, occupancy or vacancy sensors, and thus can be installed with the existing instant start ballasts for optimal energy savings
- NSF Listed: NSF/ANSI Standard 2 – Food Equipment
- No warm-up time, instant-on with full light output and stable lamp to lamp color
- DLC listed allows for rebates in areas where applicable saving on overall project cost
- No UV emission
- Suitable for dry and damp locations (cannot come in direct contact with water)
- Maximize energy savings with occupancy sensors
- Suitable for open and enclosed fixtures
- Glass lamps are suitable for use with tube guards
- Up to 162 LPW (Lamp efficacy)
- 3000K, 3500K, 4100K, 5000K color temperatures
- Dimmable down to 10% with compatible 0-10V ballast (excluding 10W)
- CRI: 82
- Available beam angle: 220° and Light Emitting Angle 340° (13W & 10W)
- Available beam angle: 220° and Light Emitting Angle 320° (12W & 9W)

Electrical

- Compatible with instant start and select programmed rapid start electronic T8 ballasts with input voltage of 120-277V and 347V
- Power factor >0.90
- THD <10%

Rated Life

- 60,000 hours (L_{70}) (10W & 13W)
- 50,000 hours (L_{70}) (9W & 12W)

Wattage Comparison

	System Power[1]	Traditional System Power F032T8 (with QHE2x32 ISN)	Energy Savings/ Year
LED9T8L48FG SUBG9	24W	55W	56%
LED10T8L48FG SUBG9	26W	55W	53%
LED12T8L48FG SUBG9	29W	55W	47%
LED13T8L48FGDIM SUBG9	32W	55W	42%

1. With QHE2x32 ISN

Warranty

- 5 year limited lamp warranty (24/7 operation)
- Install a new QHE instant start ballast with the SubstiTUBE IPS LED T8 lamp for optimal performance and to take advantage of the QUICK 72SUB+ system warranty. (See website for details.)

Ambient Operating Range

- -4°F to 113°F (-20°C to 45°C)

Max Case Temperature

- 158°F (70°C)

Certifications and Listings

- cULus 1993
- cULus
- ETL
- RoHS
- Lead Free
- FCC*
- NSF
- DLC Standard

*FCC Title 47 CFR, Part 18, Non-Consumer

Installation

- Please refer to the Installation manual included inside the packaging and the applications information listed below for more information (G13 medium bi-pin base).

Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

Ordering Guide

LED	XX	T8 /	L48 /	FG /	DIM	8	XX /	SUB /	G9
LED	Wattage 9 = 9 Watts 10 = 10 Watts 12 = 12 Watts 13 = 13 Watts	Lamp Type T8	Length 48"	FG = Frosted Glass	DIM = Dimmable	CRI 8 = 82	Color Temperature 30 = 3000K 35 = 3500K 41 = 4100K 50 = 5000K	SubstiTUBE® IPS	Generation 9

Ordering Information

Item Number	Ordering Abbreviation	Power (W)[1]	Base Type	Replaces	Input Voltage*	Length	Bulb Finish	Bare Lamp Efficacy	Typical Lumens (lm)	CCT	CRI	Case Qty	DLC Listed
41270	LED9T8L48FGDIM830SUBG9	9	G13	FO32830ECO	120-277V	4ft	Frosted Glass	178	1600	3000K	82	25	Pending
41271	LED9T8L48FGDIM835SUBG9	9	G13	FO32835ECO	120-277V	4ft	Frosted Glass	178	1600	3500K	82	25	Pending
41272	LED9T8L48FGDIM841SUBG9	9	G13	FO32841ECO	120-277V	4ft	Frosted Glass	178	1600	4100K	82	25	Pending
41273	LED9T8L48FGDIM850SUBG9	9	G13	FO32850ECO	120-277V	4ft	Frosted Glass	178	1600	5000K	82	25	Pending
40695	LED10T8/L48/FG/830/SUB/G9	10	G13	FO32830ECO	120-277V	4ft	Frosted Glass	160	1600	3000K	82	25	Yes
40696	LED10T8/L48/FG/835/SUB/G9	10	G13	FO32835ECO	120-277V	4ft	Frosted Glass	160	1600	3500K	82	25	Yes
40697	LED10T8/L48/FG/841/SUB/G9	10	G13	FO32841ECO	120-277V	4ft	Frosted Glass	160	1600	4100K	82	25	Yes
40698	LED10T8/L48/FG/850/SUB/G9	10	G13	FO32850ECO	120-277V	4ft	Frosted Glass	160	1600	5000K	82	25	Yes
41274	LED12T8L48FGDIM830SUBG9	12	G13	FO32830ECO	120-277V	4ft	Frosted Glass	167	2000	3000K	82	25	Pending
41275	LED12T8L48FGDIM835SUBG9	12	G13	FO32835ECO	120-277V	4ft	Frosted Glass	167	2000	3500K	82	25	Pending
41276	LED12T8L48FGDIM841SUBG9	12	G13	FO32841ECO	120-277V	4ft	Frosted Glass	175	2100	4100K	82	25	Pending
41277	LED12T8L48FGDIM850SUBG9	12	G13	FO32850ECO	120-277V	4ft	Frosted Glass	175	2100	5000K	82	25	Pending
40691	LED13T8/L48/FG/DIM830/SUB/G9	13	G13	FO32830ECO	120-277V	4ft	Frosted Glass	154	2000	3000K	82	25	Yes
40692	LED13T8/L48/FG/DIM835/SUB/G9	13	G13	FO32835ECO	120-277V	4ft	Frosted Glass	154	2000	3500K	82	25	Yes
40693	LED13T8/L48/FG/DIM841/SUB/G9	13	G13	FO32841ECO	120-277V	4ft	Frosted Glass	162	2100	4100K	82	25	Yes
40694	LED13T8/L48/FG/DIM850/SUB/G9	13	G13	FO32850ECO	120-277V	4ft	Frosted Glass	162	2100	5000K	82	25	Yes

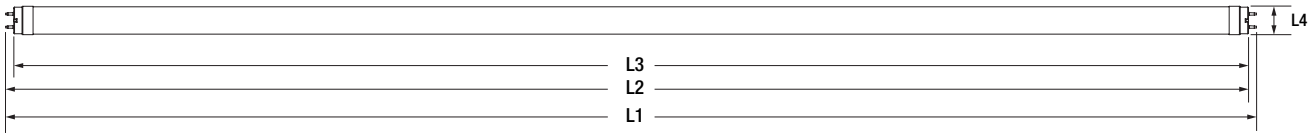
*To ballast
1. Average Lamp Power and Average Lamp Lumens rated on QHE2x32T8/UNV ISN.

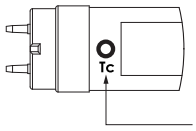
Specifications & Lighting Data

Lamp	Ballast	Current (Amps)	System Power (W)	System Lumens (lm)	System Efficacy (lm/W)	No of Lamps
LED9T8L48FGPDIM	QHE 2X32T8/UNV ISN	0.20/0.09	24	3200	133+	2
LED10T8/L48/FG	QHE 2X32T8/UNV ISN	0.22/0.10	26	3200	123	2
LED12T8L48FGPDIM	QHE 2X32T8/UNV ISN	0.24/0.10	29	4200	140+	2
LED13T8/L48/FG/DIM	QHE 2X32T8/UNV ISN	0.26/0.12	32	4200	130	2

Note: For complete system information refer to LED495 – SubstiTUBE System Information.

Physical Information





Tc point location next to label

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
LEDXXT8/L48/FG	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)

Application Information

1. Due to numerous ballast designs and topologies, this lamp should be tested on existing ballasts before mass quantities are installed.
2. Not intended for use with older dedicated voltage (120V or 277V) ballasts. These ballasts have electronic components that degrade over time and may become unsuitable for the new LED T8 lamp.
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. For instant start ballasts, use lamp holders with an internal shunt or ensure that lamp holders are wired in a shunt configuration.
6. For Programmed Rapid Start ballasts, use rapid-start lamp holders (non-shunted lamp holders).
7. De-lamp is not allowed for ISH ballasts. For approved ISN and ISL ballasts, 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).
8. Suitable for use in dry and damp environments.
9. Maximum mounting distance between tube and ballast is 20 feet.
10. Not for use with other LED or fluorescent lamps on the same ballast.
11. Not for use with magnetic ballasts.
12. Please read all installation instructions before attempting installation.
13. For detailed warranty information, please see www.ledvanceUS.com.

LEDVANCE LLC
200 Ballardvale Street
Wilmington, MA 01887 USA
Phone 1-800-LIGHTBULB (1-800-544-4828)
www.ledvanceUS.com

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